FIG. 1

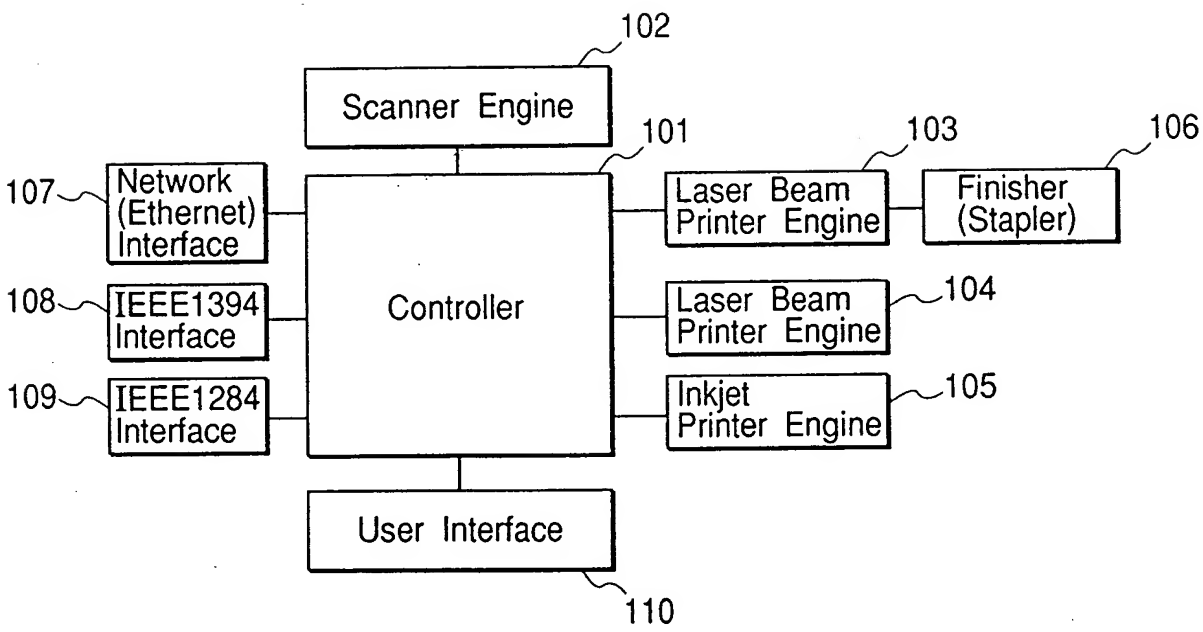

102
Scanner Engine
101
103
106
107
Network (Ethernet) Interface
Laser Beam Printer Engine
Finisher (Stapler)
108
IEEE1394 Interface
Controller
Laser Beam Printer Engine
104
109
IEEE1284 Interface
Inkjet Printer Engine
105
User Interface
110

FIG. 2

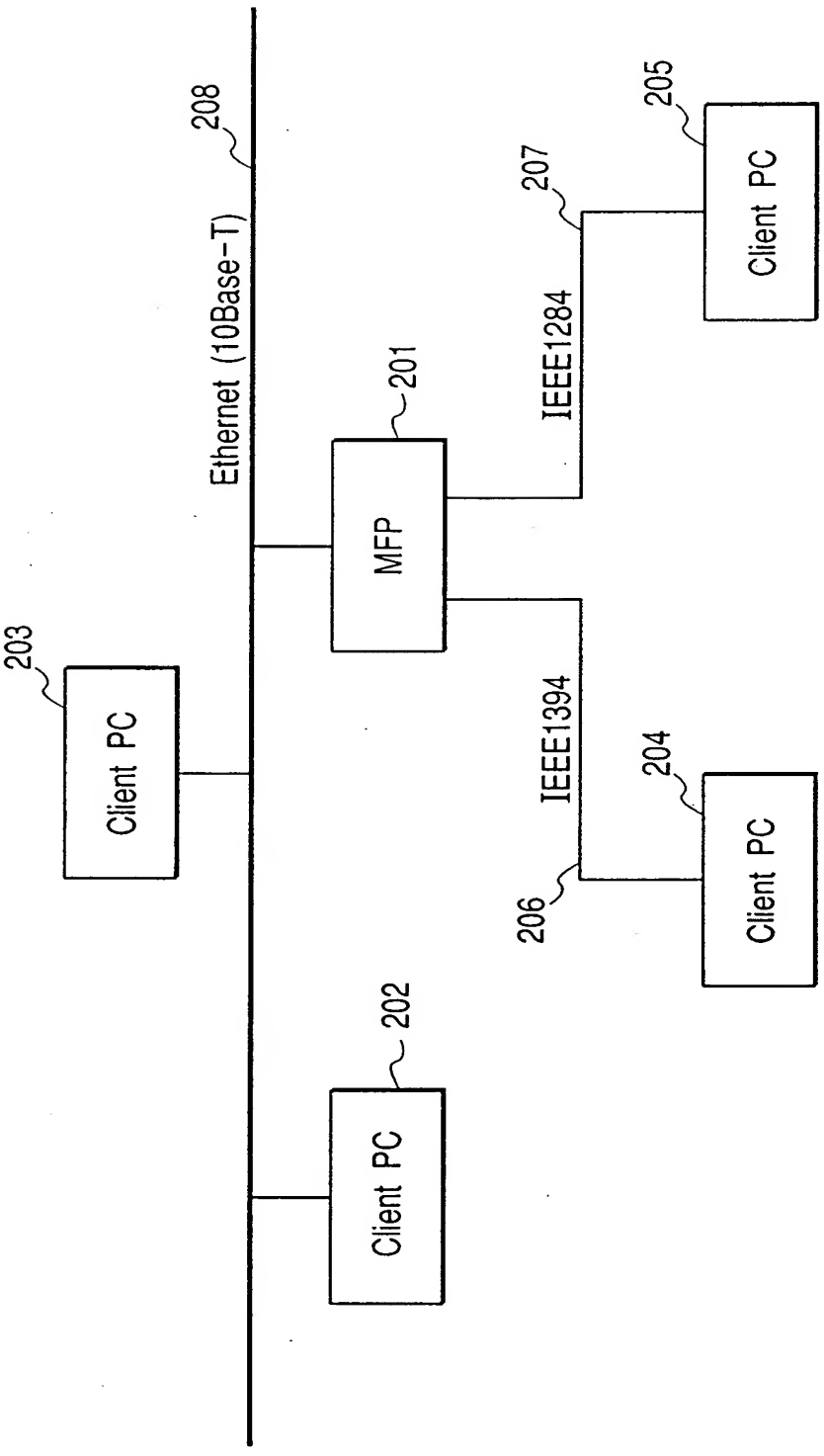

208
Ethernet (10Base-T)
203
Client PC
MFP
201
IEEE1284
207
205
Client PC
IEEE1394
206
204
Client PC
202
Client PC

FIG. 3

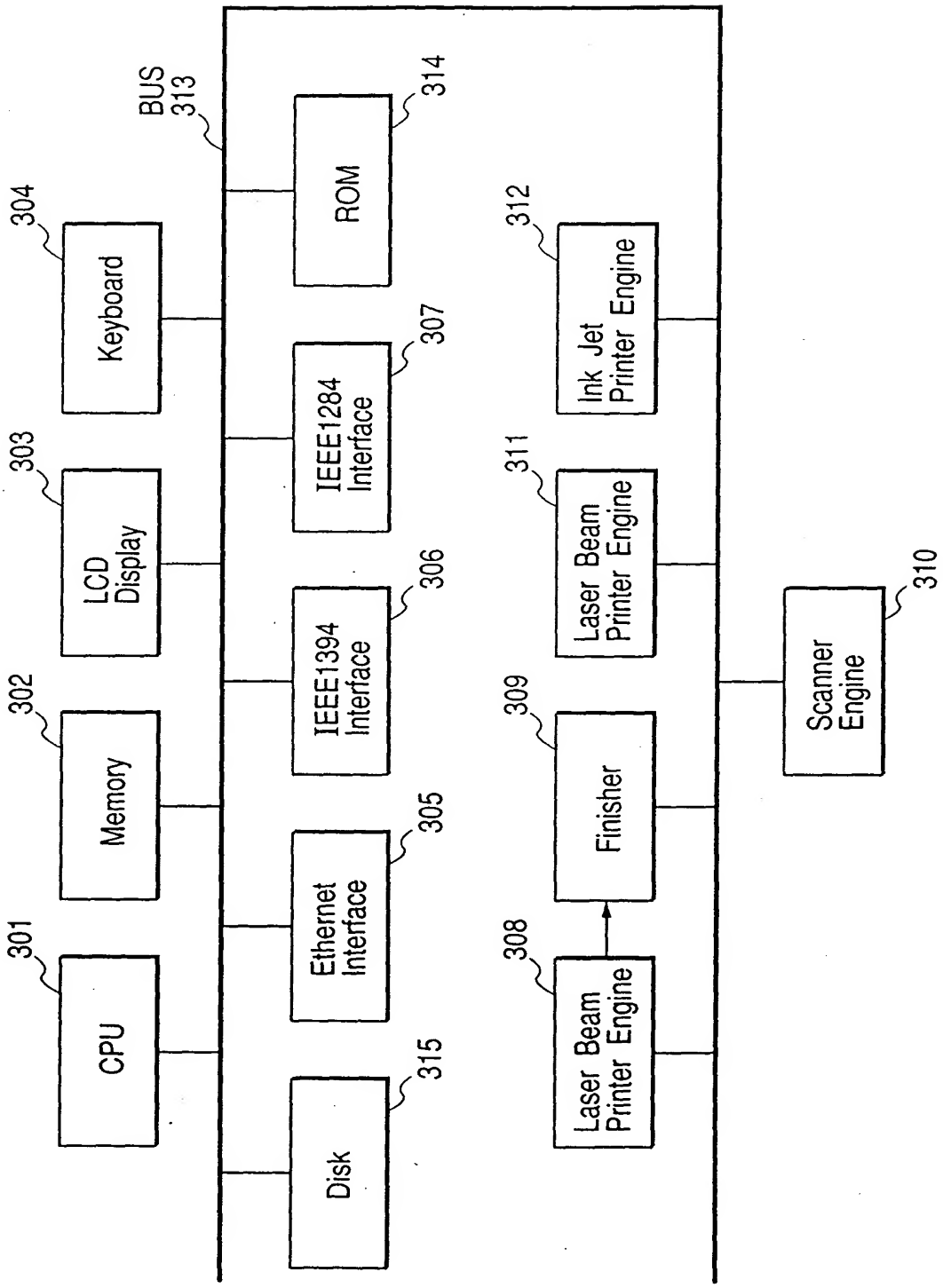

BUS
313
CPU
301
Memory
302
LCD Display
303
Keyboard
304
Ethernet Interface
305
IEEE1394 Interface
306
IEEE1284 Interface
307
ROM
314
Disk
315
Laser Beam Printer Engine
308
Finisher
309
Laser Beam Printer Engine
311
Ink Jet Printer Engine
312
Scanner Engine
310

FIG. 4

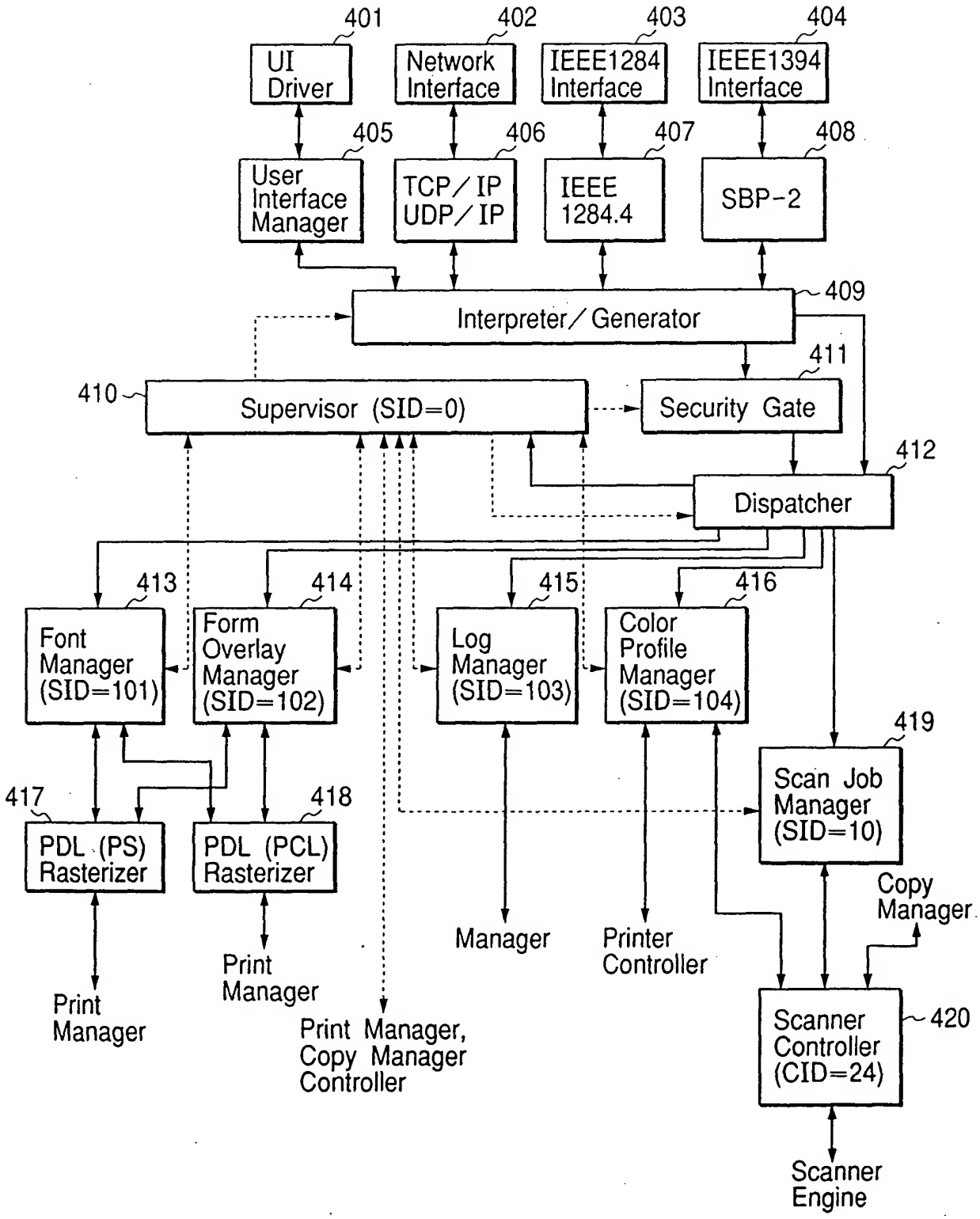

401
UI Driver
402
Network Interface
403
IEEE1284 Interface
404
IEEE1394 Interface
405
User Interface Manager
406
TCP/IP UDP/IP
407
IEEE 1284.4
408
SBP-2
409
Interpreter/Generator
410
Supervisor (SID=0)
411
Security Gate
412
Dispatcher
413
Font Manager (SID=101)
414
Form Overlay Manager (SID=102)
415
Log Manager (SID=103)
416
Color Profile Manager (SID=104)
417
PDL (PS) Rasterizer
418
PDL (PCL) Rasterizer
419
Scan Job Manager (SID=10)
420
Scanner Controller (CID=24)
Print Manager
Print Manager
Print Manager, Copy Manager Controller
Manager
Printer Controller
Copy Manager
Scanner Engine

FIG. 5

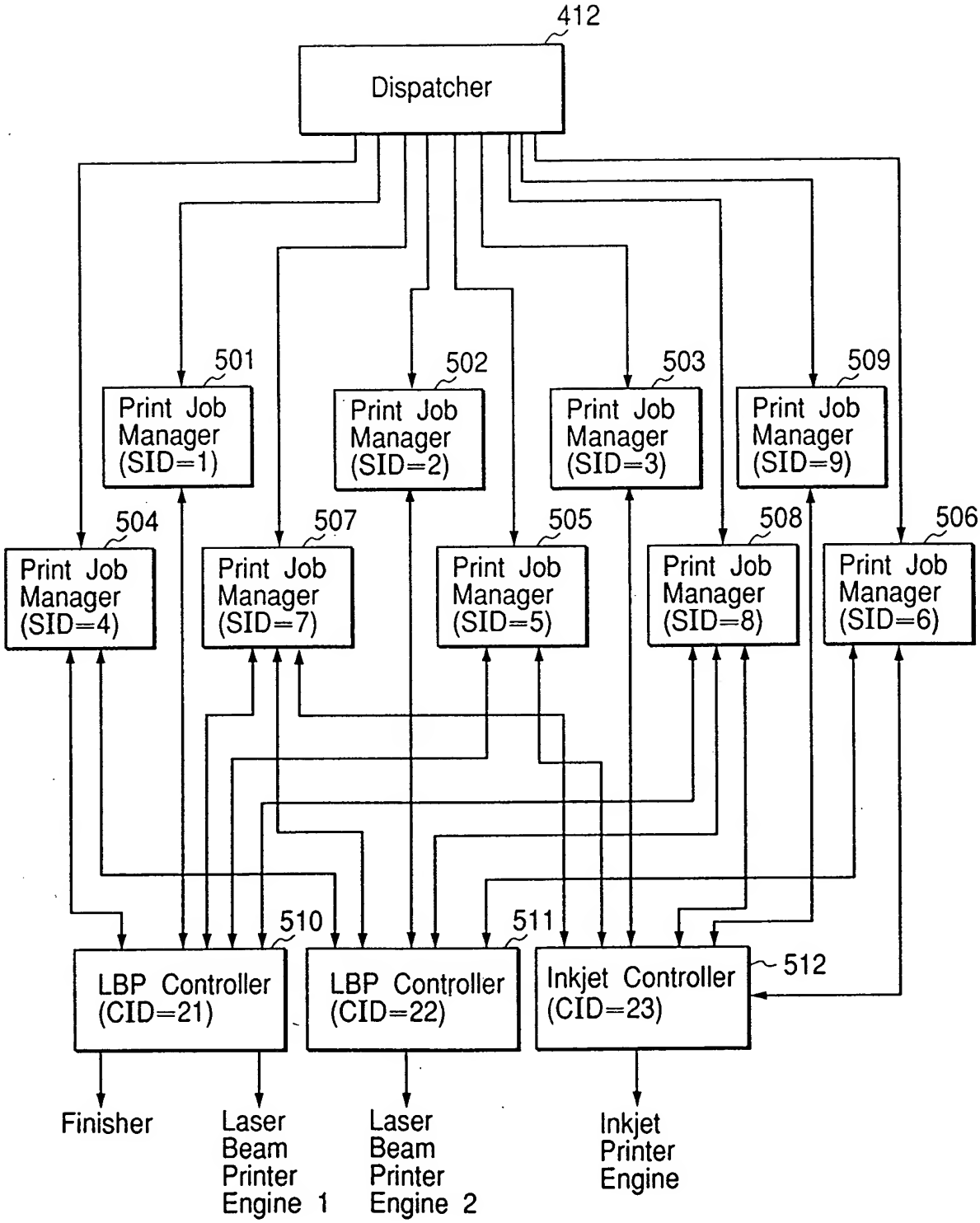
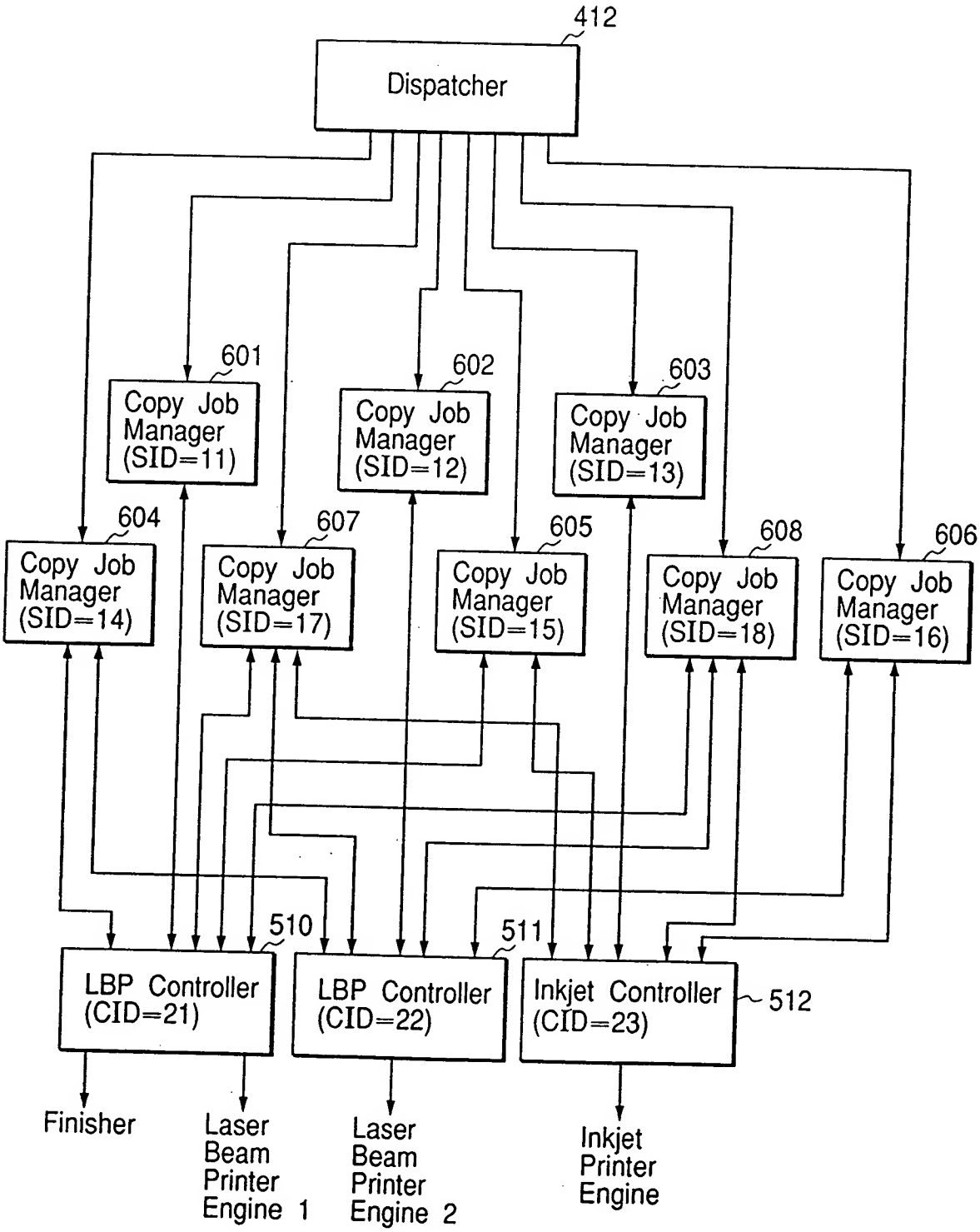

412
Dispatcher
501
Print Job Manager (SID=1)
502
Print Job Manager (SID=2)
503
Print Job Manager (SID=3)
509
Print Job Manager (SID=9)
504
Print Job Manager (SID=4)
507
Print Job Manager (SID=7)
505
Print Job Manager (SID=5)
508
Print Job Manager (SID=8)
506
Print Job Manager (SID=6)
510
511
512
LBP Controller (CID=21)
LBP Controller (CID=22)
Inkjet Controller (CID=23)
Finisher
Laser Beam Printer Engine 1
Laser Beam Printer Engine 2
Inkjet Printer Engine

FIG. 6


412
Dispatcher
601
Copy Job Manager (SID=11)
602
Copy Job Manager (SID=12)
603
Copy Job Manager (SID=13)
604
Copy Job Manager (SID=14)
607
Copy Job Manager (SID=17)
605
Copy Job Manager (SID=15)
608
Copy Job Manager (SID=18)
606
Copy Job Manager (SID=16)
510
LBP Controller (CID=21)
511
LBP Controller (CID=22)
Inkjet Controller (CID=23)
512
Finisher
Laser Beam Printer Engine 1
Laser Beam Printer Engine 2
Inkjet Printer Engine

# FIG. 7

Attribute Table (Supervisor)

| 701 Attribute ID | 702 Type ID | 703 Value |
|---|---|---|
| 10 | 1 | 0 |
| 11 | 1 | 0 |
| 100 | 11 | 10, 11, 100, 101 ,102 , 103, 104, 105, · · · |
| 101 | 11 | 1, 2, 3, 7, 9 |
| 102 | 11 | 1, 3 |
| 103 | 1 | 1 |
| 104 | 11 | 1001, 1002, 1003, 1004 |
| 105 | 11 | 1003 |
| 301 | 3 | "SuperMFP-1" |
| 302 | 13 | "Japanese", "English" |
| 303 | 1 | "English" |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| 503 | 53 | Table Data |
| | | |
| 1001 | 101 | Table Data |
| 1002 | 102 | Table Data |
| 1003 | 103 | Table Data |
| 1004 | 104 | Table Data |
| 2001 | 11 | 21, 22, 23, 24 |

# FIG. 8

- This shows Supervisor's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation |
| 102 | Supported Security Level |
| 103 | Current Security Level |
| 104 | List of Attributes that can be changed only by Manager |
| 105 | List of Attributes that can be obtained only by Manager |
| 301 | Machine Type |
| 302 | Supported Language |
| 303 | Current Language |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 503 | Event Format Table |
| 1001 | SubAddress-SID Table |
| 1002 | SID-TaskType Table |
| 1003 | User Authentication Table |
| 1004 | Access Limit Table |
| 2001 | List of Controller ID |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of CHR Trains |
| 52 | Event Setting Table Type |
| 53 | Event Format Table Type |
| 101 | SUbAddress-SID Table Type |
| 102 | SID-TaskType Table Type |
| 103 | User Authentication Table Type |
| 104 | Access Control Table Type |

# FIG. 9

SubAddress-Service ID Table

| 801 Connection Type ID | 802 SubAddress | 803 Service ID | 804 Valid Flag | 805 Valid User | 806 Invalid User |
|---|---|---|---|---|---|
| 0 | 0 | 0 | YES | | |
| 0 | 1 | 1 | YES | 2355,5678 | |
| 0 | 2 | 2 | YES | | 1234,2345 |
| 1 | 9600 | 0 | YES | | |
| 1 | 9601 | 1 | YES | | |
| 1 | 9602 | 2 | YES | 1234,2345 | |
| 1 | 8001 | 101 | YES | 1234 | |
| 1 | 8002 | 102 | YES | | |
| 2 | 45 | 0 | YES | | |
| 2 | 46 | 1 | YES | | |
| 2 | 47 | 2 | YES | | |
| 2 | 68 | 8 | NO | | |
| 2 | 89 | 10 | YES | | |
| 3 | 23 | 0 | YES | | |
| 3 | 52 | 1 | YES | | |
| 3 | 98 | 17 | YES | | |

FIG. 10

- This shows to which SubAddress a Job is to be placed
- This also manages validity/invalidity of Connection Type
- Connection Type ID

  0 : Internal
  1 : TCP/IP
  2 : IEEE1284.4
  3 : SBB-2

FIG. 11

Service ID-TaskType Table

901 902

| Service ID | Task Type |
|---|---|
| 0 | 0 |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| 7 | 1 |
| 8 | 1 |
| 9 | 1 |
| 10 | 2 |
| 11 | 3 |
| 12 | 3 |
| 13 | 3 |
| 14 | 3 |
| 15 | 3 |
| 16 | 3 |
| 17 | 3 |
| 18 | 3 |
| 101 | 101 |
| 102 | 102 |
| 103 | 103 |
| 104 | 104 |
| 21 | 201 |
| 22 | 201 |
| 23 | 201 |
| 24 | 202 |

FIG. 12

- This shows Service Type of Service ID
- Task Type corresponds to CPCA Task Type
- This is referred to also by Dispatcher and used also to distribute Command to each Manger
- TaskType
  - 0 : Supervisor
  - 1 : Print
  - 2 : Scan
  - 3 : Copy
  - 101 : Font
  - 102 : Form Overlay
  - 103 : Log
  - 104 : Color Profile

FIG. 13

User Authentication Table

| 1001 | 1002 | 1003 |
|---|---|---|
| UID | Password | Manager |
| 2355 | 2345 | NO |
| 3254 | 2223 | NO |
| 4665 | 1145 | YES |
| ⋮ | ⋮ | ⋮ |
| 2664 | 1244 | NO |

# FIG. 14

Access Control Table

| 1101 SID | 1102 Security Level | 1103 UID |
|---|---|---|
| 0 | 1 | - |
| 1 | 1 | - |
| 2 | 2 | 2355, 3254 |
| 3 | 3 | 3254, 4665 |
| | | |
| 102 | 2 | 3254 |

# FIG. 15

- This shows Security Level for each Service
- Security Level
  - 0 : Discriminate nothing
  - 1 : Discriminate Manager only
  - 2 : Available for authenticated User only (only UID is used for Authentication)
  - 3 : Available for authenticated User only (UID and Password are used for Authentication)
- UID Trains are used only when Security Level is 2 or 3

FIG. 16

Event Setting Table (Supervisor)

| 1201 Event ID | 1202 Connection Type ID | 1203 Addressee |
|---|---|---|
| 200 | 0 | |
| 399 | 1 | 123, 222, 111, 321 : 9340 |
| 432 | 2 | 35 |
| 234 | 3 | 12 |

FIG. 17

Event Format Table

| 1301 Event ID | 1302 Event Format |
|---|---|
| 200 | 676, 756 |
| 399 | 666 |
| 432 | 698 |
| 234 | 600 |

# FIG. 18

Attribute Table (Print Job Manager)

| 1401 Attribute ID | 1402 Type ID | 1403 Value |
|---|---|---|
| 10 | 1 | 1 |
| 11 | 1 | 4 |
| 100 | 11 | 10, 11, 100, 101 ,104 , 401,・・・ |
| 101 | 11 | 11, 14, 15, 17 |
| 104 | 11 | 1104, 1105 |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| 601 | 11 | 1, 2 |
| 801 | 81 | 4354:3254, 2464, 2456, 4356:124, 535, 6 |
| 802 | 82 | 3254:1:4324:43143, 2342, 6543, 3245 |
| 803 | 83 | 5425:2:25432:34324:2:12453, 3424, 2343 |
| 804 | 84 | 5425:2:25432:4:5425:5:655:2435, 563 |
| 805 | 85 | 22414:3:4324231:5:43243:2:32144:455 |
| | | |
| 1101 | 11 | 3, 5 |
| 1102 | 0 | NO |
| 1103 | 11 | 1, 2 |
| 1104 | 1 | 400 |
| 1105 | 1 | 100 |
| 2001 | 11 | 21, 22 |
| 2002 | 0 | NO |
| 2003 | 203 | Table Data |
| 2004 | 204 | Table Data |

# FIG. 19

- This shows Print Manager's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation (Job Script) |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 601 | Download Method for Supported Data |
| 801 | List of Attribute Combinations Inhibited (Type 1) |
| 802 | List of Attribute Combinations Inhibited (Type 2) |
| 803 | List of Attribute Combinations Inhibited (Type 3) |
| 804 | List of Attribute Combinations Inhibited (Type 4) |
| 805 | List of Attribute Combinations Inhibited (Type 5) |
| 1101 | List of Supported PDL |
| 1102 | Color Print Possible |
| 1103 | Type of Supported Finishing |
| 1104 | Highest Resolution |
| 1105 | Lowest Resolution |
| 2001 | List of Controller ID Executing Job |
| 2002 | Controller Auto Selection Possible |
| 2003 | Job Table |
| 2004 | Job Request Table |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of CHR Trains |
| 52 | Event Setting Table Type |
| 81 | Type of Inhibited Attribute Combination List 1 |
| 82 | Type of Inhibited Attribute Combination List 2 |
| 83 | Type of Inhibited Attribute Combination List 3 |
| 203 | Job Table Type |
| 204 | Job Request Table Type |

FIG. 20

Job Table

| 1501 Job ID | 1502 Job File Name |
|---|---|
| 1 | P0001 |
| 2 | P1001 |
| 3 | P2001 |

FIG. 21

Job Request Table

| 1503 Job ID | 1504 Control ID | 1505 Job ID |
|---|---|---|
| 1 | 21 | 100 |
| 1 | 22 | 101 |
| 2 | 21 | 102 |
| 2 | 22 | 403 |
| 3 | - | - |
| | | |
| | | |

# FIG. 22

Attribute Table (Scan Job Maneger)

| 1601 Attribute ID | 1602 Type ID | 1603 Value |
|---|---|---|
| 10 | 1 | 2 |
| 11 | 1 | 10 |
| 100 | 11 | 10, 11, 100, 101 ,104, 401, ・・・ |
| 101 | 11 | 21, 22, 25, 29, |
| 104 | 11 | 602 |
| ⋮ | ⋮ | ⋮ |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| 602 | 11 | 1, 2 |
| ⋮ | ⋮ | ⋮ |
| 1201 | 11 | 3, 5 |
| 1202 | 0 | YES |
| 1203 | 11 | 100, 200, 300, 400 |
| 2001 | 11 | 24 |
| 2002 | 0 | NO |
| 2003 | 203 | Table Data |

# FIG. 23

- This shows Scan Manager's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation (Job Script) |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 602 | Upload Method for Supported Data |
| 1201 | List of Supported Image Formats |
| 1202 | Color Scan Possible |
| 1203 | List of Available Resolutions |
| 2001 | List of Controller ID Executing Job |
| 2002 | Controller Auto Selection Possible |
| 2003 | Job Table |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of Trains |
| 52 | Event Setting Table Type |
| 203 | Job Table Method |

# FIG. 24

Attribute Table (Copy Job Manger)

| 1701 Attribute ID | 1702 Type ID | 1703 Value |
|---|---|---|
| 10 | 1 | 3 |
| 11 | 1 | 18 |
| 100 | 11 | 10, 11, 100, 101 ,104, 401, ・・・ |
| 101 | 11 | 31, 32, 35 |
| 104 | 11 | 1304, 1305 |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| | | |
| 1302 | 0 | NO |
| 1303 | 11 | 1, 2 |
| 1304 | 1 | 400 |
| 1305 | 1 | 100 |
| 2001 | 11 | 21, 22, 23, 24 |
| 2002 | 0 | YES |
| 2003 | 203 | Table Data |

# FIG. 25

- This shows Copy Manager's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation (Job Script) |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 1302 | Color Print Possible |
| 1303 | Type of Supported Finishing |
| 1304 | Highest Resolution |
| 1305 | Lowest Resolution |
| 2001 | List of Controller ID Executing Job |
| 2002 | Controller Auto Seleletion Possible |
| 2003 | Job Table |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of CHR Trains |
| 52 | Event Setting Table Type |
| 203 | Job Request Table Type |

# FIG. 26

Attribute Table (Font Manager)

| 1801 Attribute ID | 1802 Type ID | 1803 Value |
|---|---|---|
| 10 | 1 | 101 |
| 11 | 1 | 101 |
| 100 | 11 | 10, 11, 100, 101 ,104, 401, ・・・ |
| 101 | 11 | 110, 111, 112, |
| 104 | 11 | |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| 601 | 11 | 1, 2 |
| 602 | 11 | 1, 2 |
| | | |
| 1501 | 11 | 3, 5 |
| 1502 | 1 | 10 |
| 1503 | 1 | 3 |
| 1504 | 150 | Table Data |

# FIG. 27

- This shows Font Manager's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation (Resource Script) |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 601 | Download Method for Supported Data |
| 602 | Upload Method for Supported Data |
| 1501 | List of Supported Font Types |
| 1502 | Max No. of Retainable Fonts |
| 1503 | No. of Currently Retained Fonts |
| 1504 | List of Retained Fonts |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of Trains |
| 52 | Event Setting Table Type |
| 150 | Font Table |

# FIG. 28

Font Table

| 1901 Font ID | 1902 Font Type | 1902 Font Name | 1903 Font Data File Name |
|---|---|---|---|
| 1 | 1 | Gothic | 1500 |
| 2 | 2 | Times | 1501 |
| 3 | 1 | Helvetica | 1502 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# FIG. 29

Attribute Table (Form Overlay Manager)

| 2001 Attribute ID | 2002 Type ID | 2003 Value |
|---|---|---|
| 10 | 1 | 102 |
| 11 | 1 | 102 |
| 100 | 11 | 10, 11, 100, 101 ,104, 401 · · · |
| 101 | 11 | 110, 111, 112, |
| 104 | 11 | |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| 601 | 11 | 1, 2 |
| 602 | 11 | 1, 2 |
| | | |
| 1601 | 11 | 1, 2 |
| 1602 | 1 | 10 |
| 1603 | 1 | 3 |
| 1604 | 160 | Table Data |

# FIG. 30

- This shows Form Overlay Manager's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation (Resource Script) |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 601 | Download Method for Supported Data |
| 602 | Upload Method for Supported Data |
| 1601 | List of Supported Formats |
| 1602 | Max No. of Retainable Forms |
| 1603 | No. of Currently Retained Forms |
| 1604 | List of Retained Forms |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of Trains |
| 52 | Event Setting Table Type |
| 160 | Form Table |

# FIG. 31

Form Table

| 2101 Form ID | 2102 Format | 2103 Form Name | 2104 Form Data File Name |
|---|---|---|---|
| 1 | 1 | Confidential | 1600 |
| 2 | 2 | Reference | 1601 |
| 3 | 1 | Logo | 1602 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# FIG. 32

Attribute Table (Log Manager)

| 2201 Attribute ID | 2202 Type ID | 2203 Value |
|---|---|---|
| 10 | 1 | 103 |
| 11 | 1 | 103 |
| 100 | 11 | 10, 11, 100, 101 ,104, 401 · · · |
| 101 | 11 | 110, 111, 112, |
| 104 | 11 | |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| 602 | 11 | 1, 2 |
| | | |
| 1703 | 1 | 3 |
| 1704 | 170 | Table Data |
| 1705 | 171 | Table Data |

# FIG. 33

- This shows Log Manager's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation (Resource Script) |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 602 | Upload Method for Supported Data |
| 1703 | No. of Retained Logs |
| 1704 | List of Retained Logs |
| 1705 | Log Format Table |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of Trains |
| 52 | Event Setting Table Type |
| 170 | Log Table |
| 171 | Log Format Table Type |

# FIG. 34

Log Table

| 2301 Log ID | 2302 Log Data File Name |
|---|---|
| 1 | 1700 |
| 2 | 1701 |
| 3 | 1702 |
| | |
| | |
| | |
| | |
| | |
| | |

# FIG. 35

Contents of Log Data (File Name : 1700)

| 2401 Log Format ID | 2402 Date / Time | 2403 Value |
|---|---|---|
| 1 | 98 / 1 / 3 1 : 23 | 12345, 4, 1.23, "OK" |
| 2 | 98 / 1 / 3 1 : 25 | 22345, 12, 4.22, "OK" |
| 1 | 98 / 1 / 3 1 : 43 | 98763, 11, 3.45, "Canceled" |
| 2 | 98 / 1 / 3 2 : 33 | 77623, 5, 1.44, "NG" |
| 1 | 98 / 1 / 3 3 : 32 | 12346, 5, 1.66, "OK" |

# FIG. 36

Log Format Table

| 2501 Log Format ID | 2502 Format |
|---|---|
| 1 | 1 : 701, 1 : 565, 1 : 765, 1 :777 |
| 2 | 11 : 701, 11 : 565, 11 : 765, 11 :777 |

# FIG. 37

Attribute Table (Color Profile Manager)

| 2601 Attribute ID | 2602 Type ID | 2603 Value |
|---|---|---|
| 10 | 1 | 104 |
| 11 | 1 | 104 |
| 100 | 11 | 10, 11, 100, 101 ,104, 401, ・・・ |
| 101 | 11 | 110, 111, 112, |
| 104 | 11 | |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| 601 | 11 | 1, 2 |
| 602 | 11 | 1, 2 |
| | | |
| 1801 | 11 | 3, 5 |
| 1802 | 1 | 10 |
| 1803 | 1 | 3 |
| 1804 | 180 | Table Data |

# FIG. 38

- This shows Color Profile Manager's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 10 | TaskType |
| 11 | Service ID |
| 100 | List of Attribute ID |
| 101 | Supported Operation (Resource Script) |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 601 | Download Method for Supported Data |
| 602 | Upload Method for Supported Data |
| 1801 | List of Supported Formats |
| 1802 | Max No. of Retainable Profiles |
| 1803 | No. of Currently Retained Profiles |
| 1804 | List of Retained Profiles |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of Trains |
| 52 | Event Setting Table Type |
| 180 | Profile Table |

# FIG. 39

Color Profile Table

| 2701 Profile ID | 2702 Format | 2703 Profile Data File Name |
|---|---|---|
| 1 | 3 | 1800 |
| 2 | 5 | 1801 |
| 3 | 3 | 1802 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

# FIG. 40

Attribute Table (Printer Controller)

| 2801 Attribute ID | 2802 Type ID | 2803 Value |
|---|---|---|
| 12 | 1 | 1 |
| 13 | 1 | 21 |
| 100 | 11 | 12, 13, 104 · · · |
| 104 | 11 | |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| | | |
| 5001 | 0 | NO |
| 5002 | 11 | 1, 2, 3 |
| 5003 | 1 | 1200 |
| 5004 | 1 | 100 |
| 5005 | 500 | Table Data |

# FIG. 41

- This shows Printer Controller's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 12 | Controller Type |
| 13 | Controller ID |
| 100 | List of Attribute ID |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 5001 | Color Print Possible |
| 5002 | Type of Supported Finishing |
| 5003 | Highest Resolution |
| 5004 | Lowest Resolution |
| 5005 | Job Queue Table |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of CHR Trains |
| 52 | Event Setting Table Type |
| 500 | Job Queue Table Type |

FIG. 42

Job Queue Table

| 2901 | 2902 | 2903 |
|---|---|---|
| Job ID | Status | File Name |
| 100 | 1 | C100 |
| 101 | 2 | C101 |
| 102 | 3 | C102 |
| 103 | 3 | C103 |
| 104 | 3 | C104 |
| 105 | 3 | C105 |
| | | |

FIG. 43

- List of Job Being Executed and on Standby in Printer Controller
- Status

  1 : Executed
  2 : Being Executed by Engine
  3 : On Standby

# FIG. 44

Attribute Table (Scanner Controller)

| 3001 Attribute ID | 3002 Type ID | 3003 Value |
|---|---|---|
| 12 | 1 | 2 |
| 13 | 1 | 24 |
| 100 | 11 | 12, 13, 104 ・・・ |
| 104 | 11 | |
| | | |
| 401 | 11 | 45, 78, 34, 13 |
| 402 | 11 | 565, 537, 545, 523 |
| 403 | 11 | 100, 100, 100, 200 |
| 404 | 13 | 0.56, 0.78, 0.34, 0.55 |
| 405 | 3 | 135.45 |
| 406 | 3 | 500.00 |
| 501 | 11 | 200, 399, 432, 234 |
| 502 | 52 | Table Data |
| | | |
| 6001 | 0 | YES |
| 6002 | 12 | 200.00, 300.00 |
| 6003 | 1 | 1200 |
| 6004 | 1 | 100 |

# FIG. 45

- This shows Scanner Controller's Attributes
- Client has been informed of Meaning of Attribute ID

- Attribute ID

| | |
|---|---|
| 12 | Controller Type |
| 13 | Controller ID |
| 100 | List of Attribute ID |
| 104 | List of Attributes that can be changed only by Manager |
| 401 | Current Count Data |
| 402 | Count Data Format |
| 403 | Count Limit Data |
| 404 | Count Unit Price Data |
| 405 | Current Charge Data |
| 406 | Charge Limit Data |
| 501 | List of Supported Events |
| 502 | Event Setting Table |
| 6001 | Color Scan Possible |
| 6002 | Max Original Size |
| 6003 | Highest Resolution |
| 6004 | Lowest Resolution |

- Type ID

| | |
|---|---|
| 0 | Boolean |
| 1 | Integer |
| 2 | Real Number |
| 3 | CHR Train |
| 11 | List of Integers |
| 12 | List of Real Numbers |
| 13 | List of CHR Trains |
| 52 | Event Setting Table Type |

FIG. 46

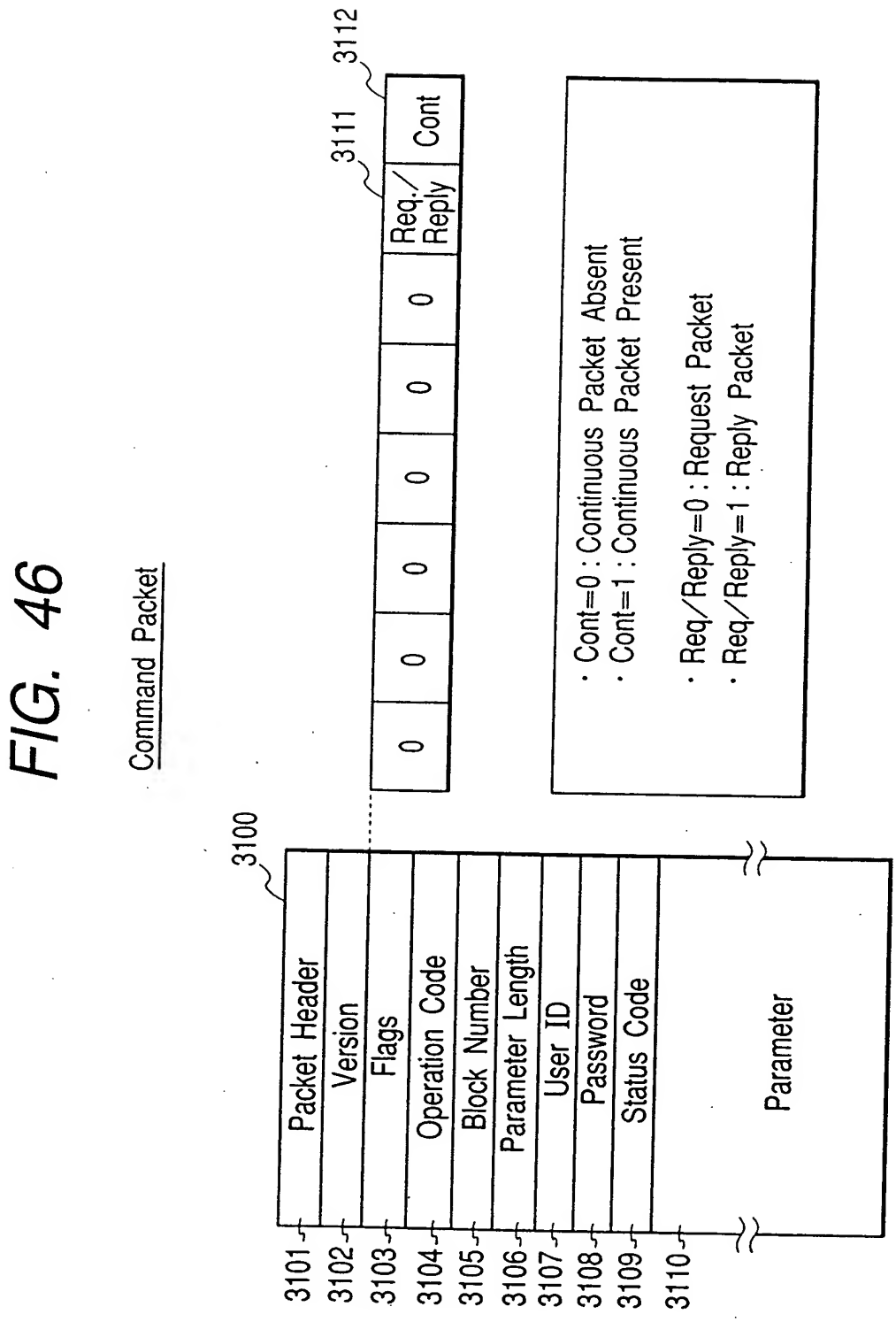

Command Packet
3100
3101 Packet Header
3102 Version
3103 Flags
3104 Operation Code
3105 Block Number
3106 Parameter Length
3107 User ID
3108 Password
3109 Status Code
3110 Parameter
3111 Req./Reply
3112 Cont
0 0 0 0 0 0 0 0
· Cont=0 : Continuous Packet Absent
· Cont=1 : Continuous Packet Present
· Req/Reply=0 : Request Packet
· Req/Reply=1 : Reply Packet

FIG. 47

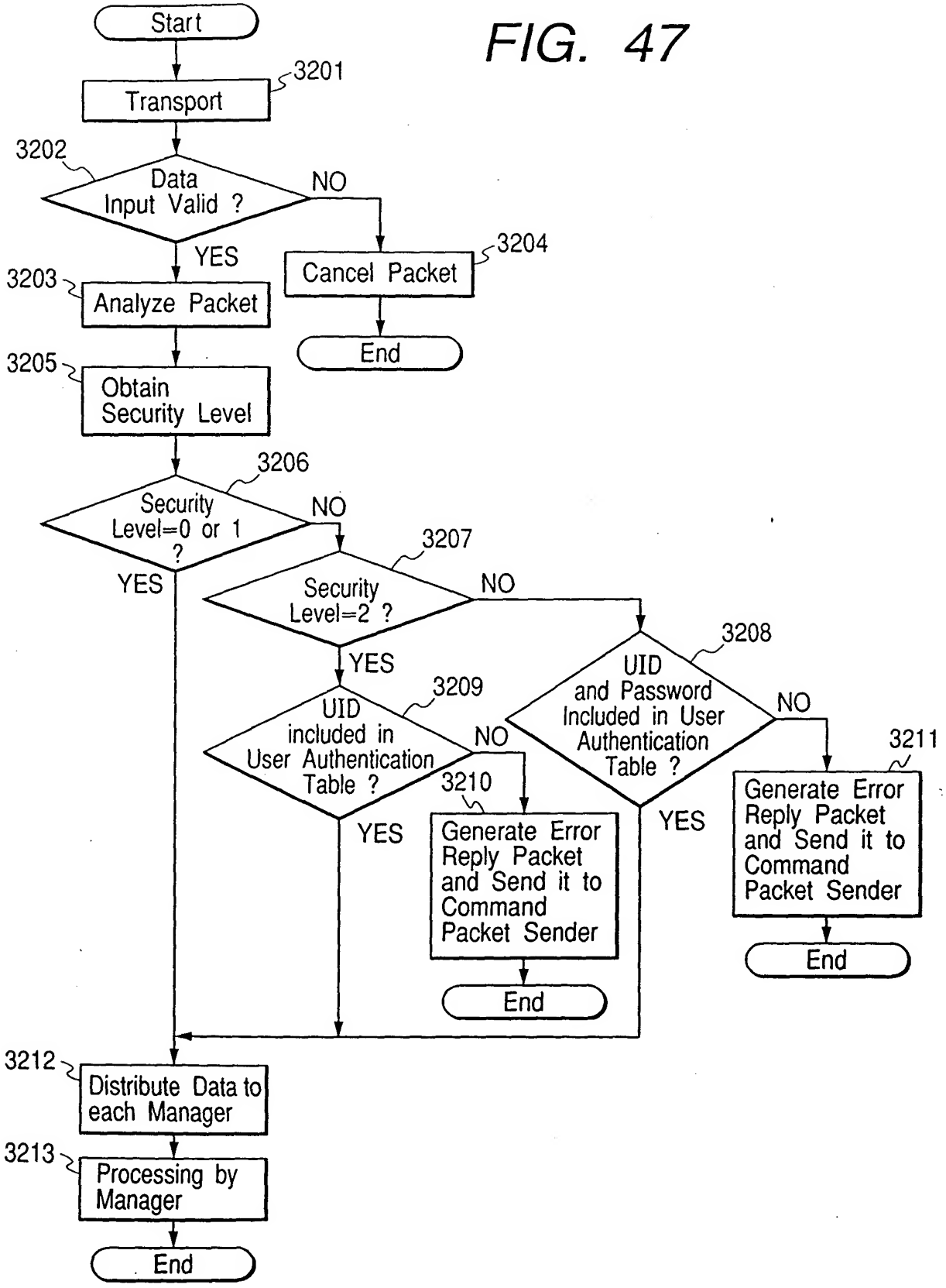

Start
Transport
3201
3202
Data Input Valid ?
NO
YES
3203
Analyze Packet
3204
Cancel Packet
End
3205
Obtain Security Level
3206
Security Level=0 or 1 ?
NO
YES
3207
Security Level=2 ?
NO
YES
3208
UID and Password Included in User Authentication Table ?
NO
YES
3209
UID included in User Authentication Table ?
NO
YES
3210
Generate Error Reply Packet and Send it to Command Packet Sender
End
3211
Generate Error Reply Packet and Send it to Command Packet Sender
End
3212
Distribute Data to each Manager
3213
Processing by Manager
End

FIG. 48

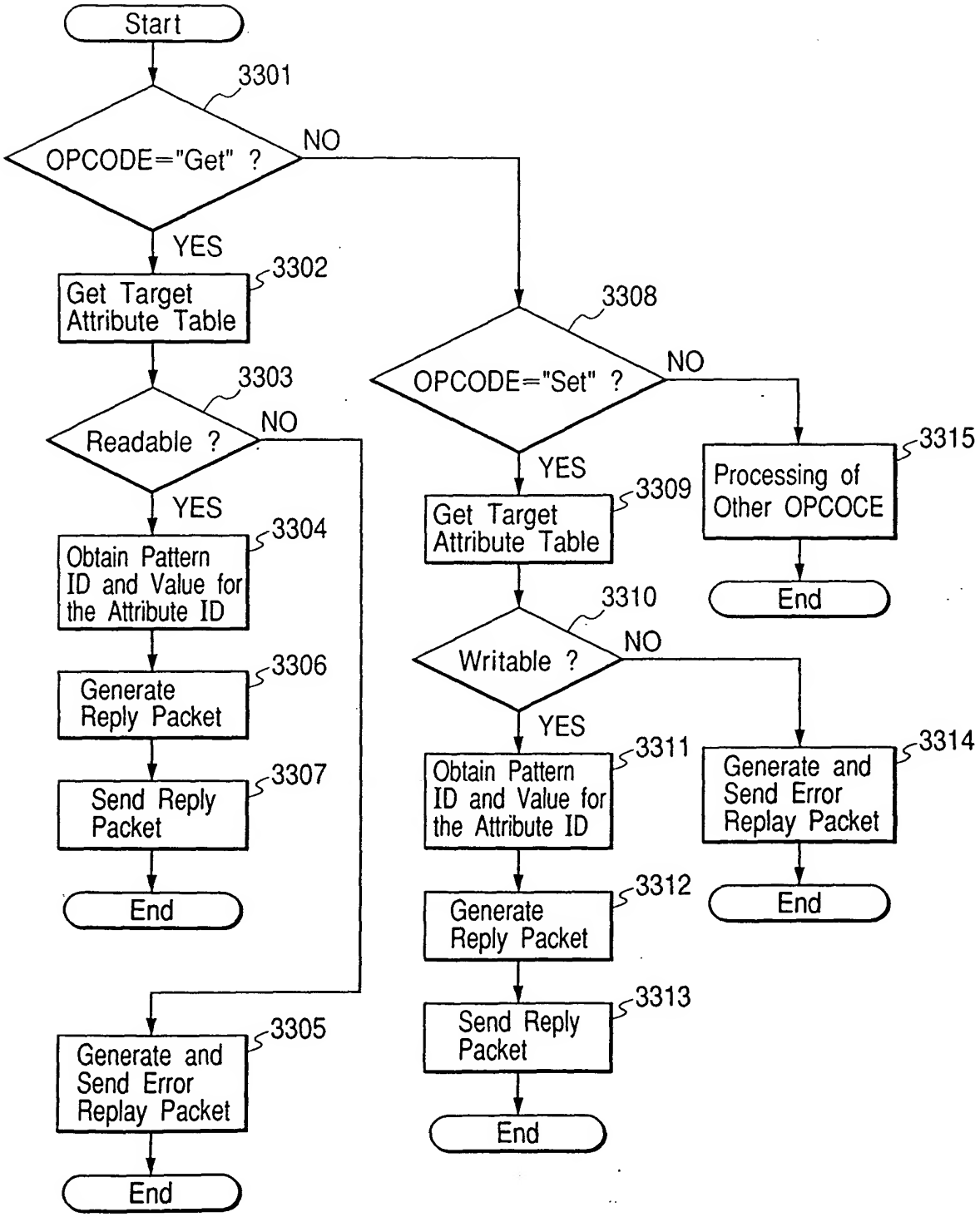

Start
3301
OPCODE="Get" ?
NO
YES
3302
Get Target Attribute Table
3303
Readable ?
NO
YES
3304
Obtain Pattern ID and Value for the Attribute ID
3306
Generate Reply Packet
3307
Send Reply Packet
End
3305
Generate and Send Error Replay Packet
End
3308
OPCODE="Set" ?
NO
YES
3309
Get Target Attribute Table
3310
Writable ?
NO
YES
3311
Obtain Pattern ID and Value for the Attribute ID
3312
Generate Reply Packet
3313
Send Reply Packet
End
3315
Processing of Other OPCOCE
End
3314
Generate and Send Error Replay Packet
End

FIG. 49

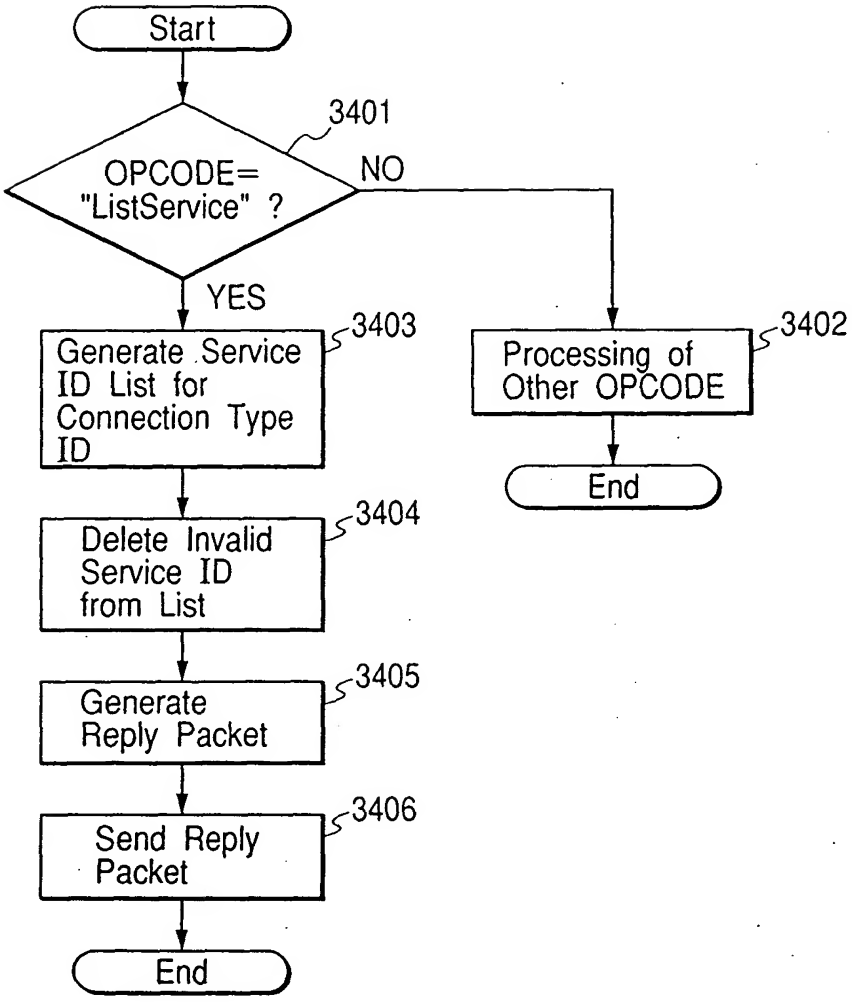

Start
3401
OPCODE= "ListService" ?
NO
YES
3403
Generate Service ID List for Connection Type ID
3404
Delete Invalid Service ID from List
3405
Generate Reply Packet
3406
Send Reply Packet
End
3402
Processing of Other OPCODE
End

FIG. 50

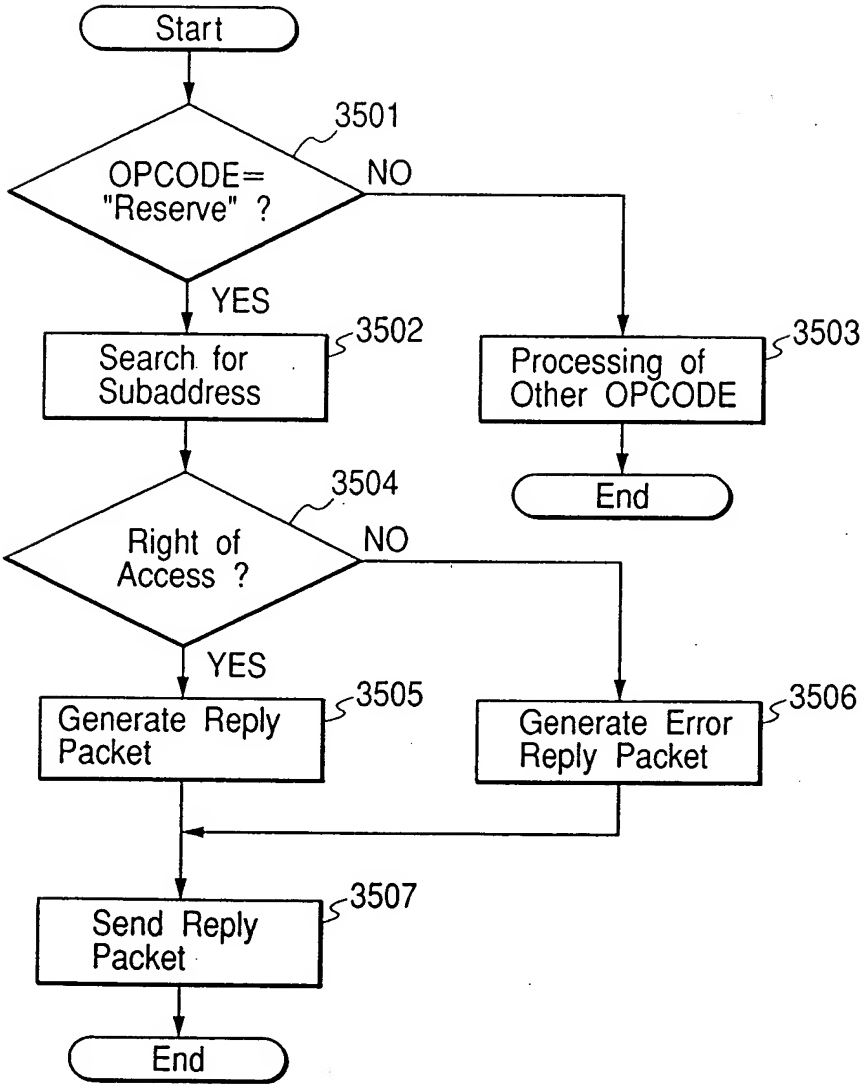

Start
3501
OPCODE= "Reserve" ?
NO
YES
3502
Search for Subaddress
3503
Processing of Other OPCODE
End
3504
Right of Access ?
NO
YES
3505
Generate Reply Packet
3506
Generate Error Reply Packet
3507
Send Reply Packet
End

FIG. 51

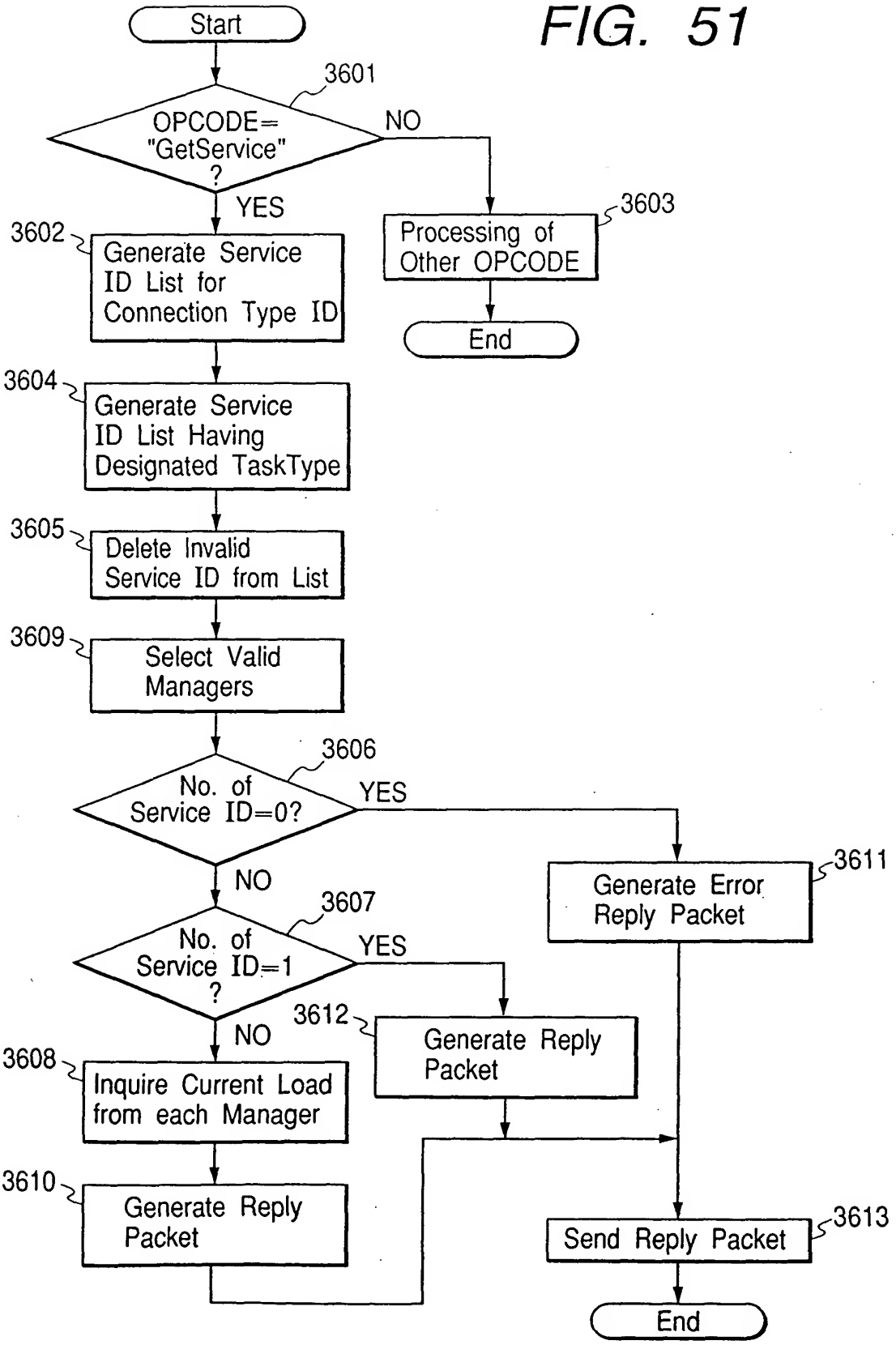

Start
3601
OPCODE= "GetService" ?
NO
YES
3603
Processing of Other OPCODE
End
3602
Generate Service ID List for Connection Type ID
3604
Generate Service ID List Having Designated TaskType
3605
Delete Invalid Service ID from List
3609
Select Valid Managers
3606
No. of Service ID=0?
YES
3611
Generate Error Reply Packet
NO
3607
No. of Service ID=1 ?
YES
3612
Generate Reply Packet
NO
3608
Inquire Current Load from each Manager
3610
Generate Reply Packet
3613
Send Reply Packet
End

FIG. 52

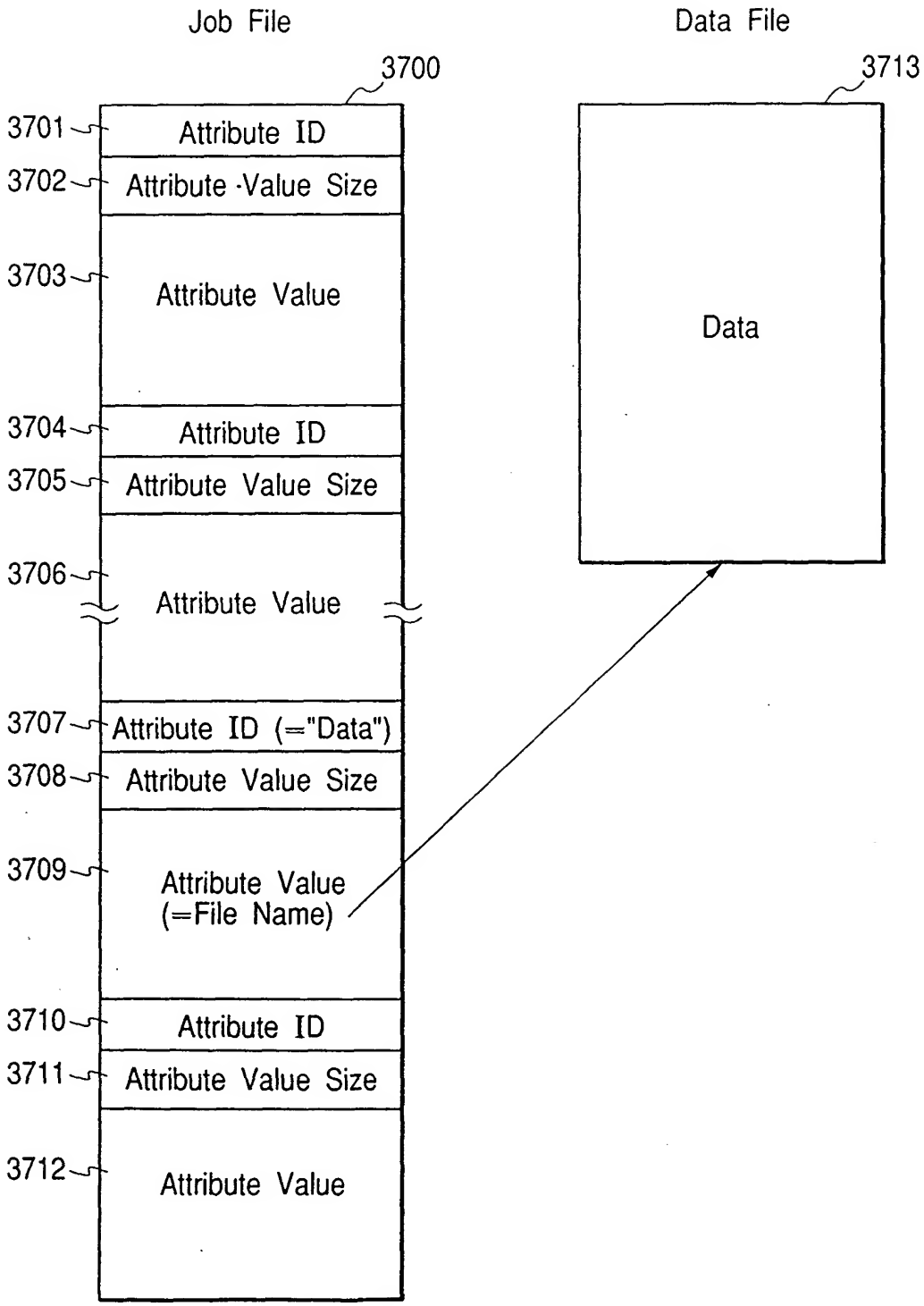

Job File
Data File
3700
3713
3701
Attribute ID
3702
Attribute Value Size
3703
Attribute Value
Data
3704
Attribute ID
3705
Attribute Value Size
3706
Attribute Value
3707
Attribute ID (="Data")
3708
Attribute Value Size
3709
Attribute Value
(=File Name)
3710
Attribute ID
3711
Attribute Value Size
3712
Attribute Value

FIG. 53

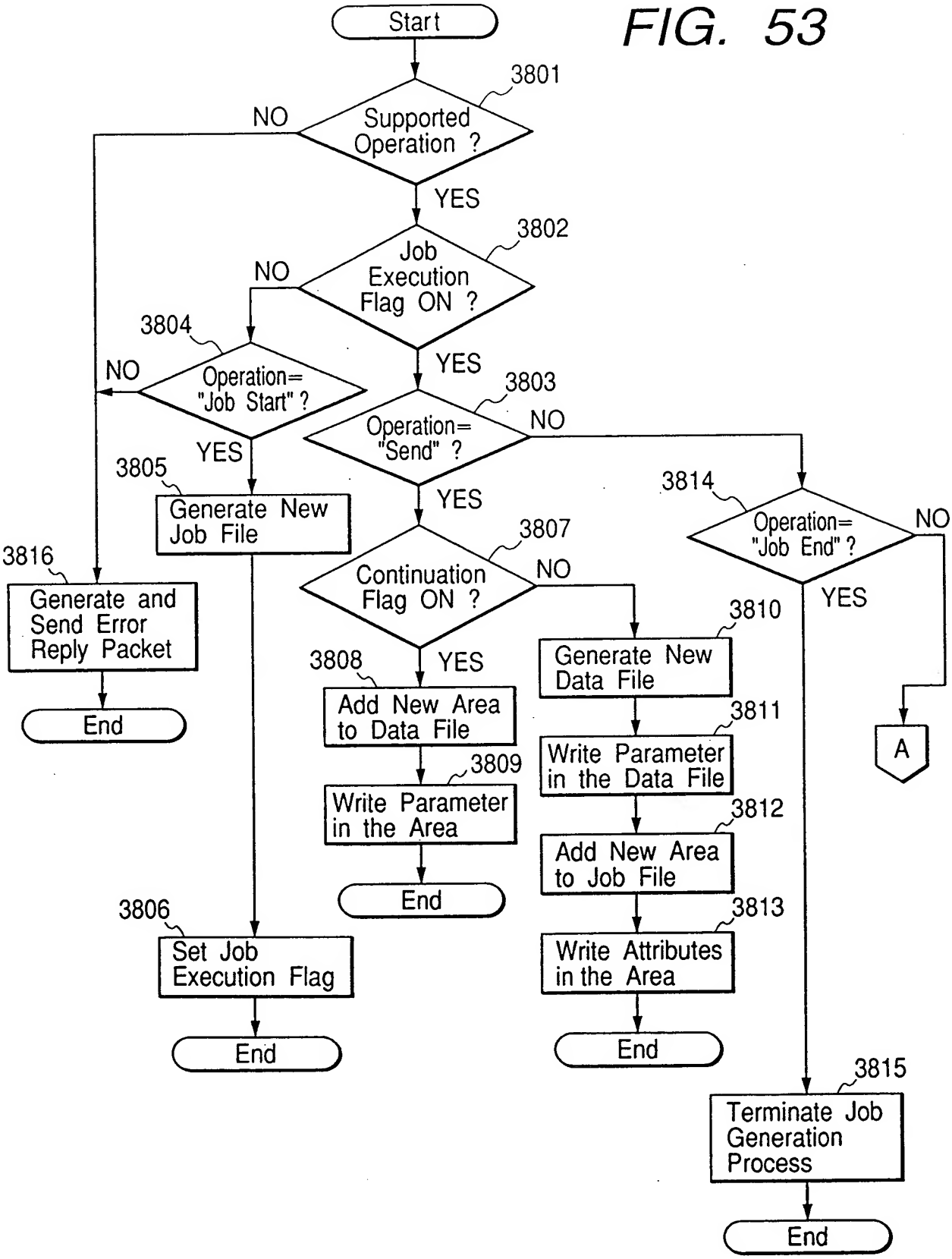

Start
3801
Supported Operation ?
NO
YES
3802
Job Execution Flag ON ?
NO
YES
3804
Operation= "Job Start" ?
NO
YES
3803
Operation= "Send" ?
NO
YES
3805
Generate New Job File
3816
Generate and Send Error Reply Packet
End
3807
Continuation Flag ON ?
NO
YES
3808
Add New Area to Data File
3809
Write Parameter in the Area
End
3806
Set Job Execution Flag
End
3814
Operation= "Job End" ?
NO
YES
A
3810
Generate New Data File
3811
Write Parameter in the Data File
3812
Add New Area to Job File
3813
Write Attributes in the Area
End
3815
Terminate Job Generation Process
End

FIG. 54

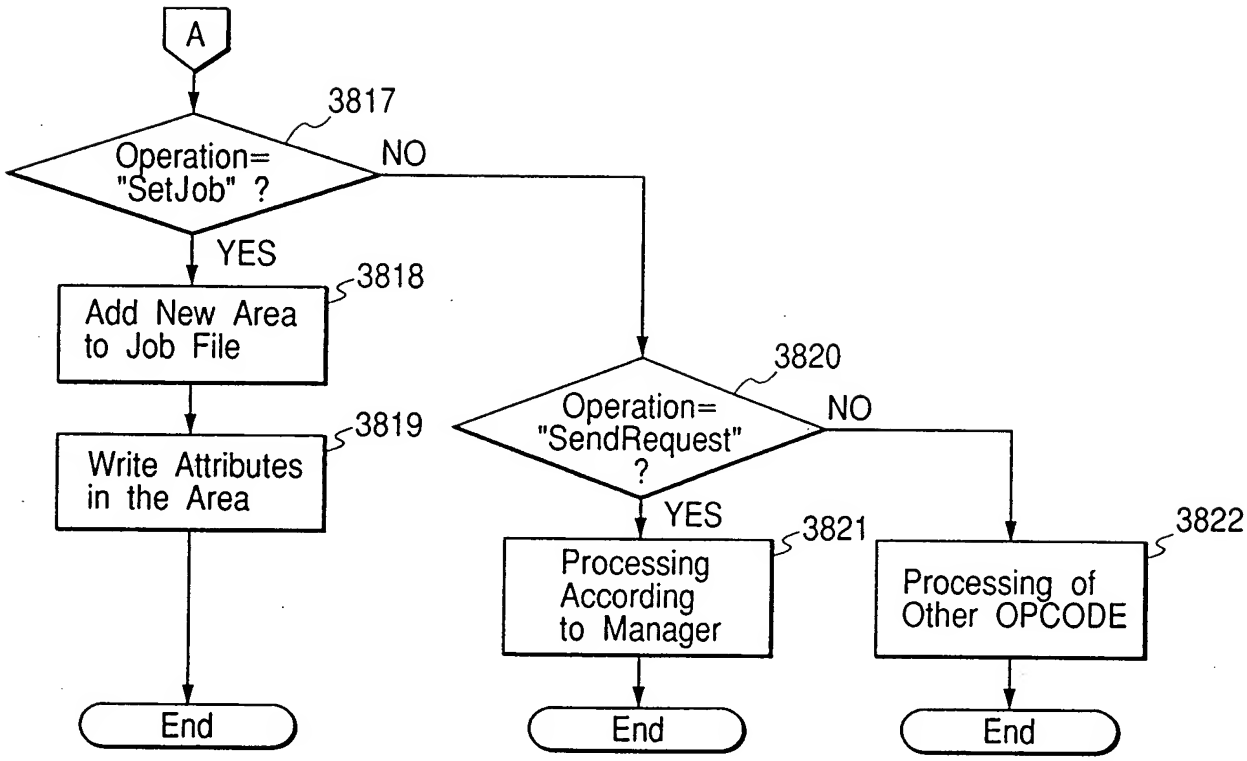

A
3817
Operation= "SetJob" ?
NO
YES
3818
Add New Area to Job File
3819
Write Attributes in the Area
End
3820
Operation= "SendRequest" ?
NO
YES
3821
Processing According to Manager
End
3822
Processing of Other OPCODE
End

FIG. 55

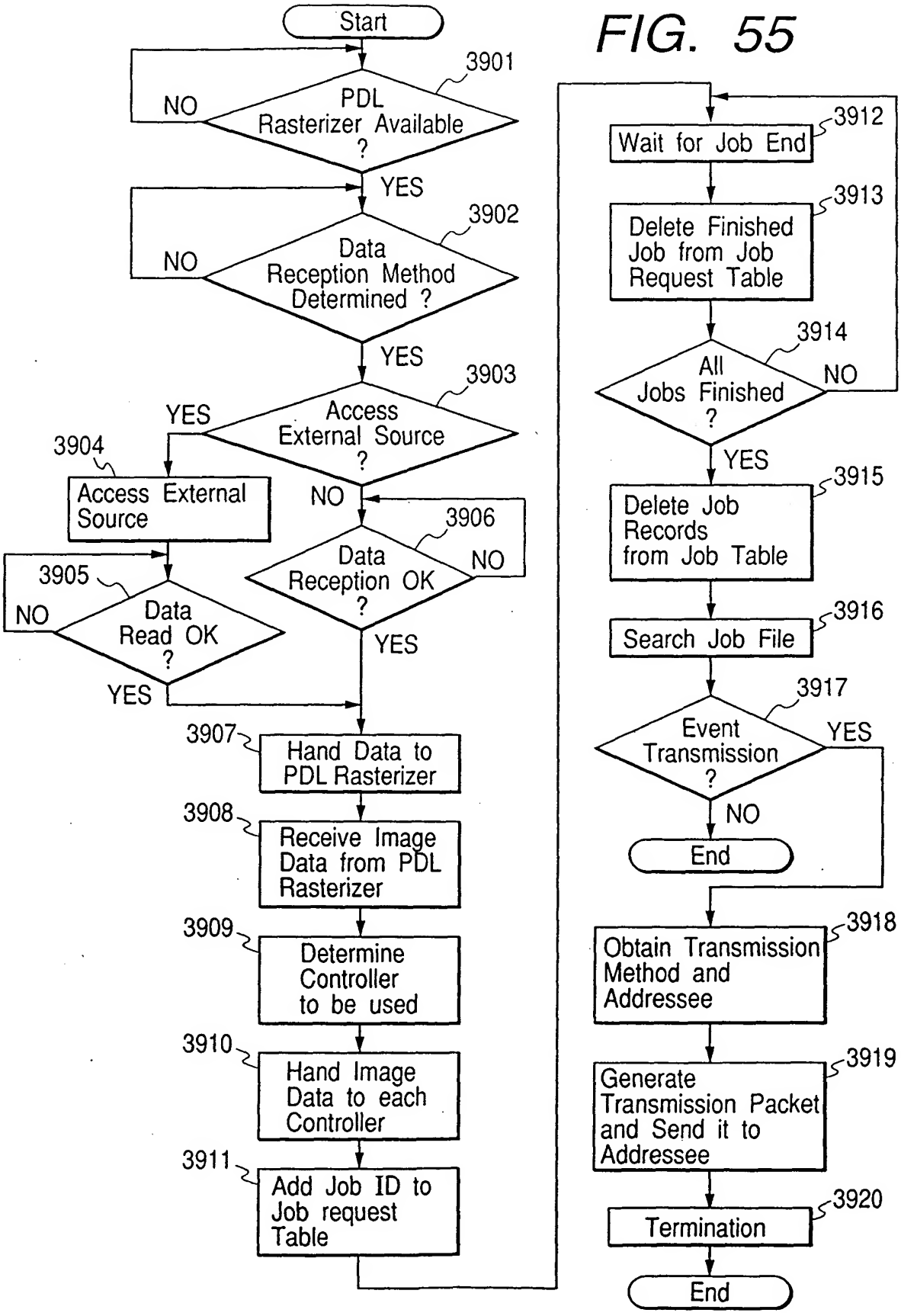

Start
3901
PDL Rasterizer Available ?
NO
YES
3902
Data Reception Method Determined ?
NO
YES
3903
Access External Source ?
YES
NO
3904
Access External Source
3905
Data Read OK ?
NO
YES
3906
Data Reception OK ?
NO
YES
3907
Hand Data to PDL Rasterizer
3908
Receive Image Data from PDL Rasterizer
3909
Determine Controller to be used
3910
Hand Image Data to each Controller
3911
Add Job ID to Job request Table
3912
Wait for Job End
3913
Delete Finished Job from Job Request Table
3914
All Jobs Finished ?
NO
YES
3915
Delete Job Records from Job Table
3916
Search Job File
3917
Event Transmission ?
YES
NO
End
3918
Obtain Transmission Method and Addressee
3919
Generate Transmission Packet and Send it to Addressee
3920
Termination
End

FIG. 56

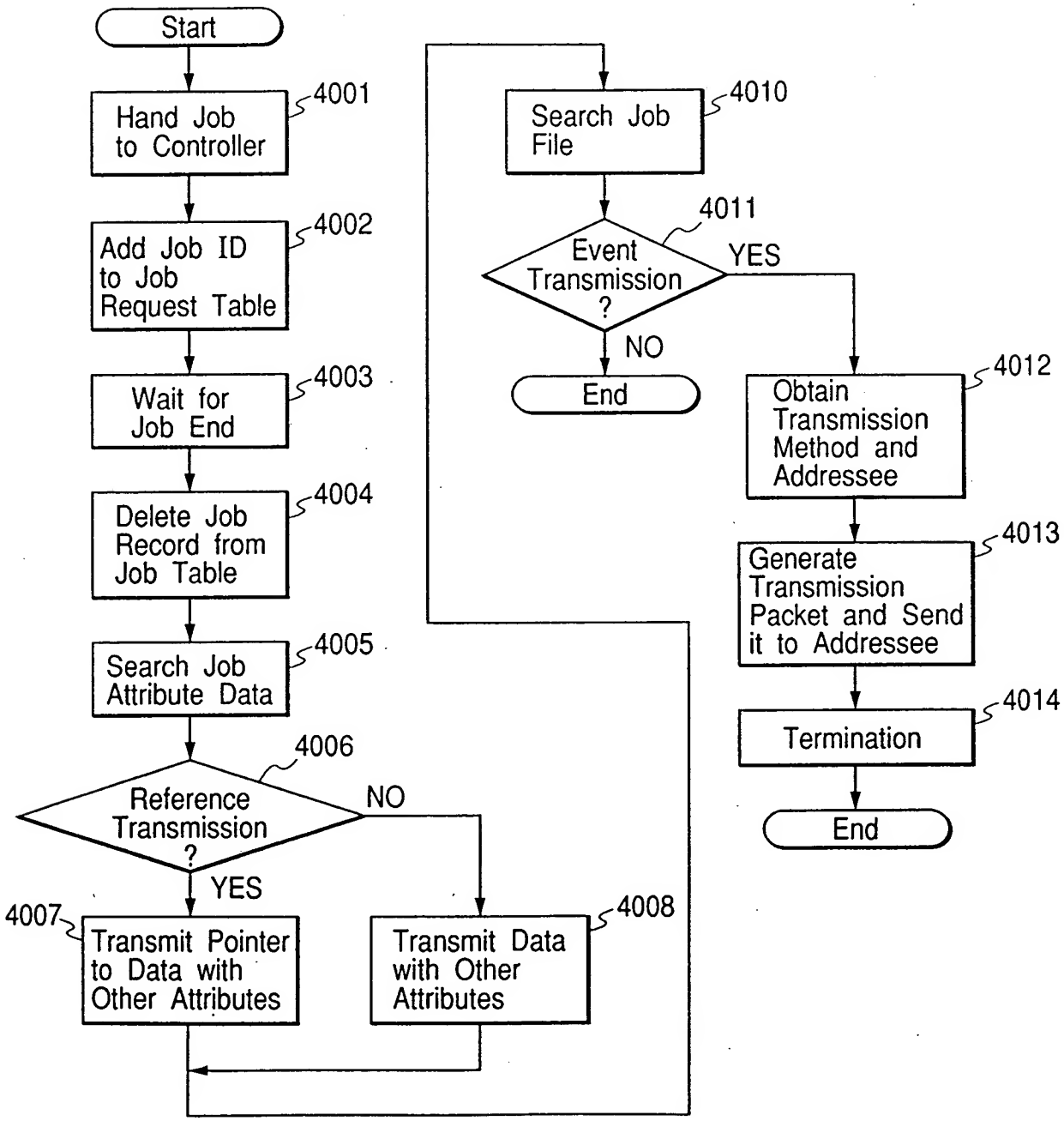

Start
Hand Job to Controller
4001
Add Job ID to Job Request Table
4002
Wait for Job End
4003
Delete Job Record from Job Table
4004
Search Job Attribute Data
4005
Reference Transmission ?
4006
NO
YES
4007
Transmit Pointer to Data with Other Attributes
Transmit Data with Other Attributes
4008
Search Job File
4010
Event Transmission ?
4011
YES
NO
End
Obtain Transmission Method and Addressee
4012
Generate Transmission Packet and Send it to Addressee
4013
Termination
4014
End

FIG. 57

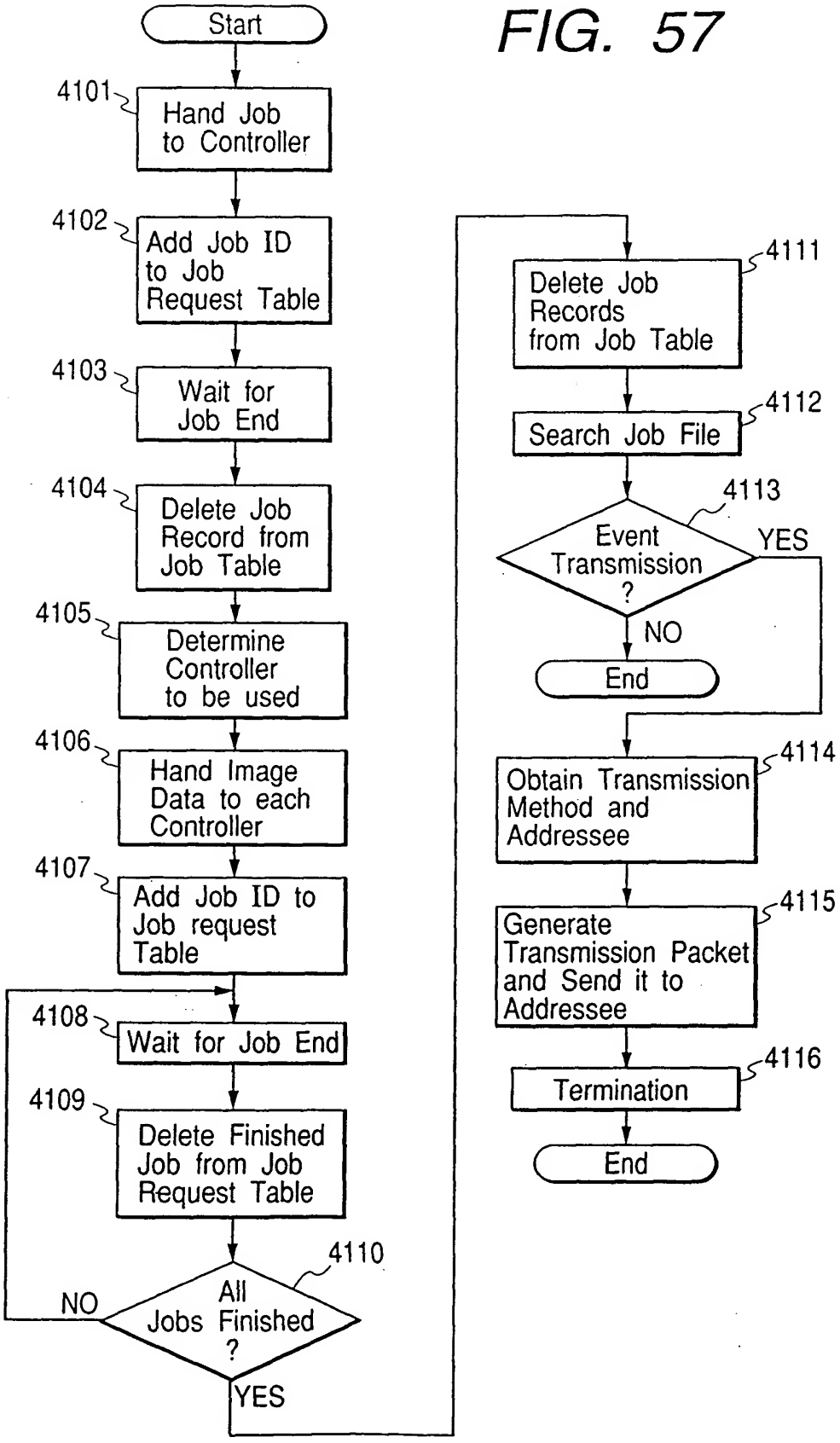

Start
4101
Hand Job to Controller
4102
Add Job ID to Job Request Table
4103
Wait for Job End
4104
Delete Job Record from Job Table
4105
Determine Controller to be used
4106
Hand Image Data to each Controller
4107
Add Job ID to Job request Table
4108
Wait for Job End
4109
Delete Finished Job from Job Request Table
4110
All Jobs Finished ?
NO
YES
4111
Delete Job Records from Job Table
4112
Search Job File
4113
Event Transmission ?
YES
NO
End
4114
Obtain Transmission Method and Addressee
4115
Generate Transmission Packet and Send it to Addressee
4116
Termination
End

FIG. 58

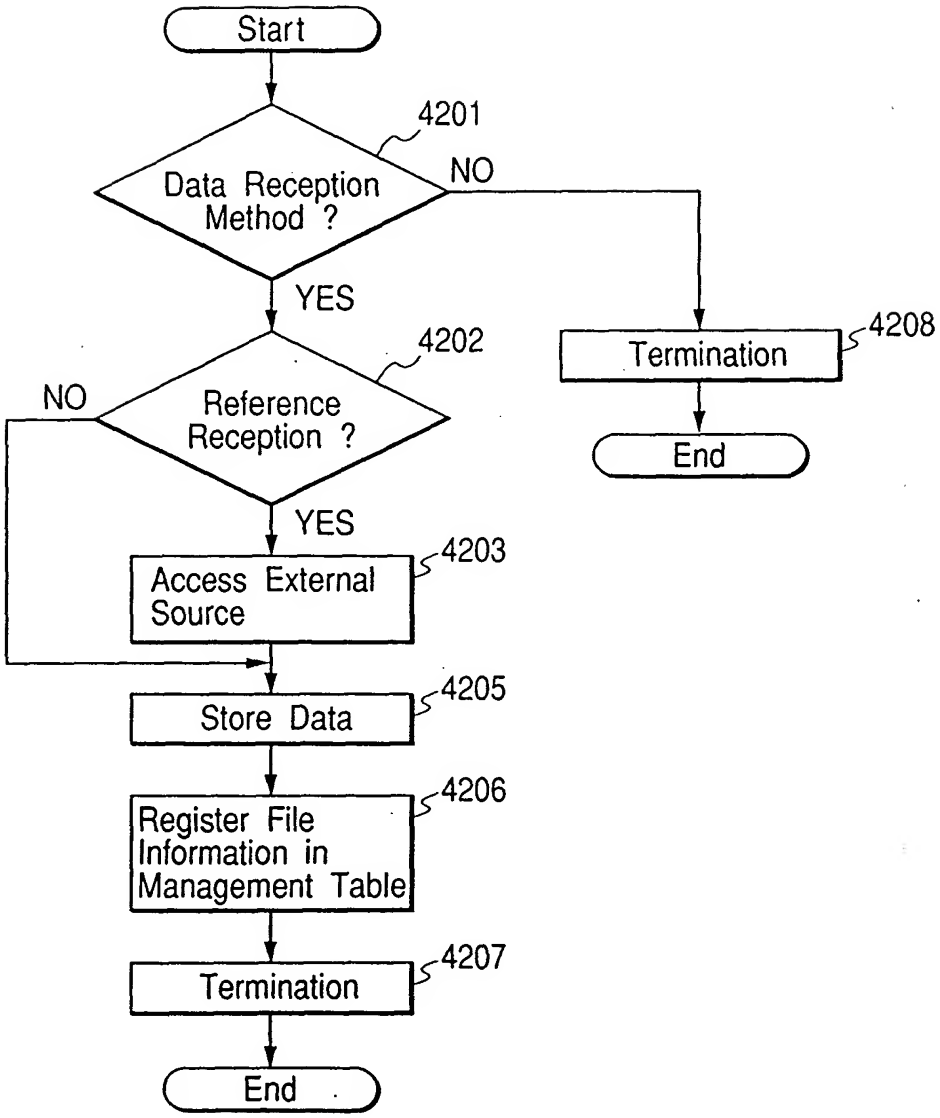

Start
4201
Data Reception Method ?
NO
YES
4202
Reference Reception ?
NO
YES
4208
Termination
End
4203
Access External Source
4205
Store Data
4206
Register File Information in Management Table
4207
Termination
End

FIG. 59

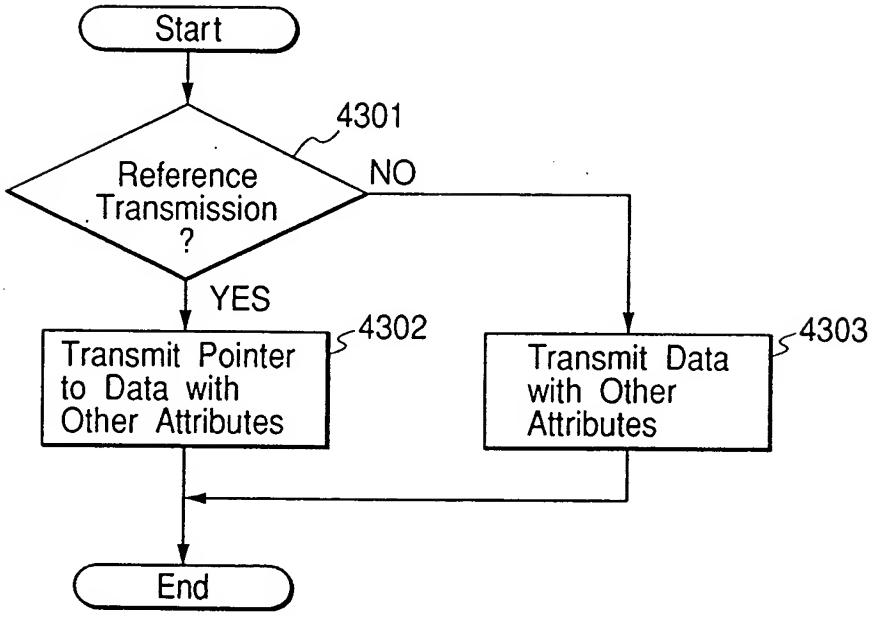

Start
4301
Reference Transmission ?
NO
YES
4302
Transmit Pointer to Data with Other Attributes
4303
Transmit Data with Other Attributes
End

FIG. 60

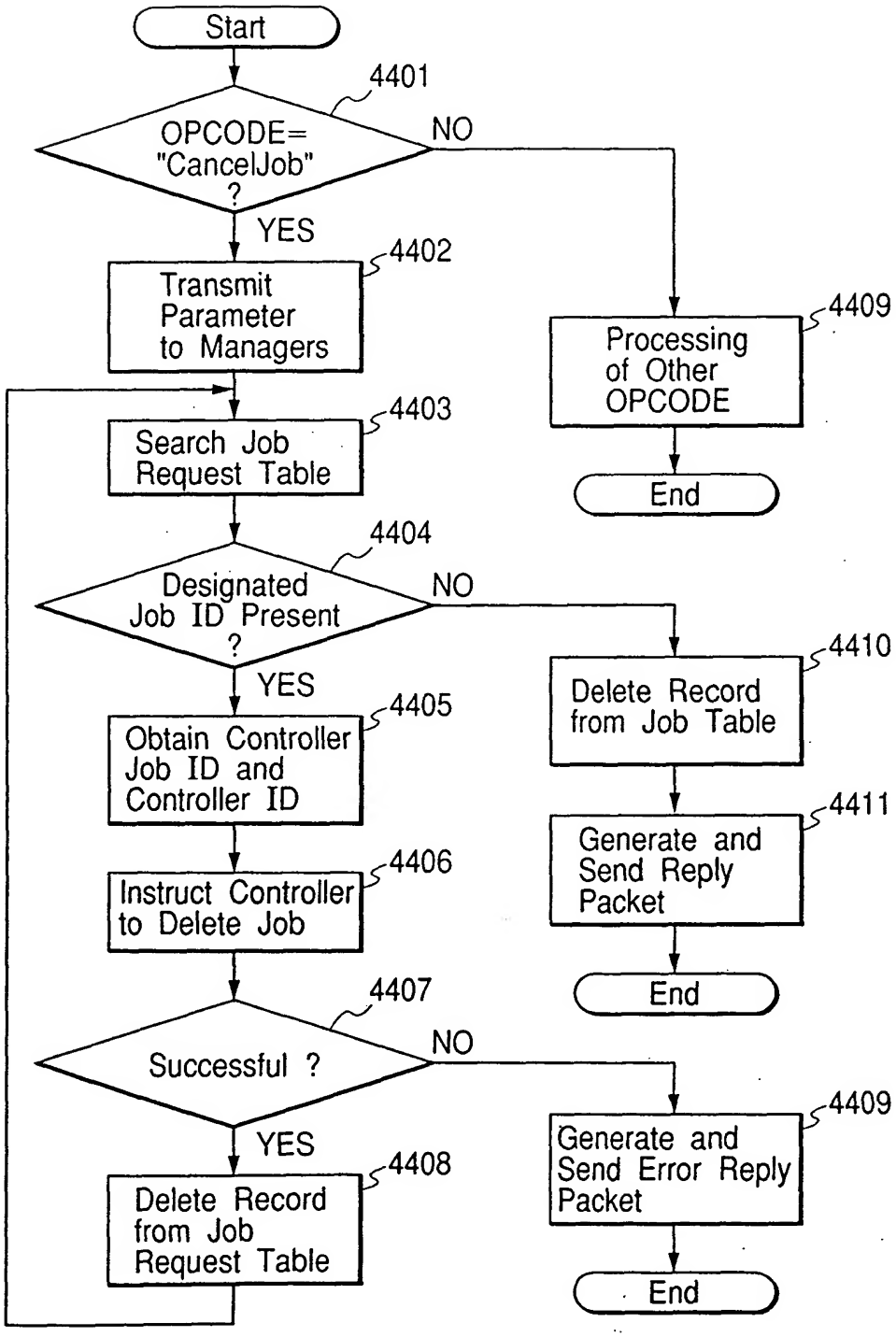

Start
4401
OPCODE= "CancelJob" ?
NO
YES
4402
Transmit Parameter to Managers
4409
Processing of Other OPCODE
End
4403
Search Job Request Table
4404
Designated Job ID Present ?
NO
YES
4410
Delete Record from Job Table
4405
Obtain Controller Job ID and Controller ID
4411
Generate and Send Reply Packet
4406
Instruct Controller to Delete Job
End
4407
Successful ?
NO
YES
4409
Generate and Send Error Reply Packet
4408
Delete Record from Job Request Table
End

FIG. 61

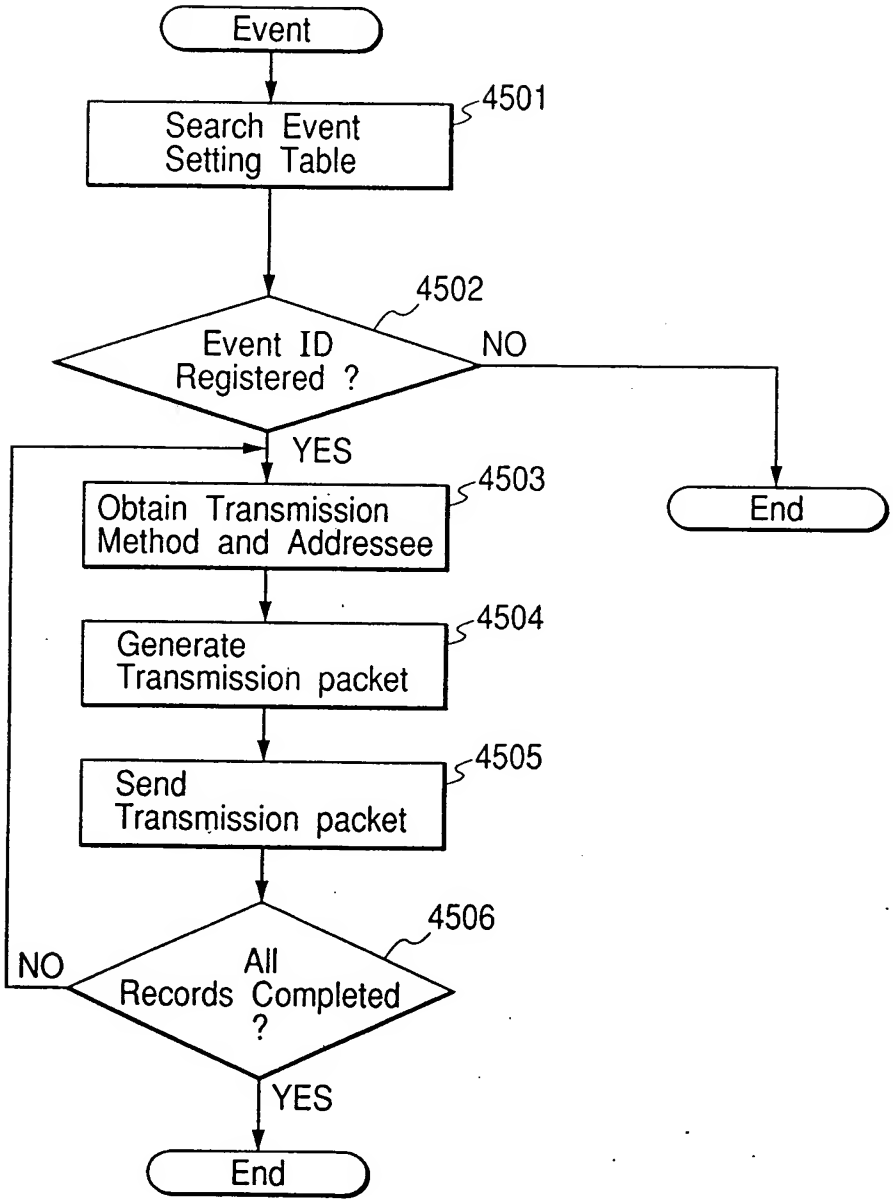

Event
Search Event Setting Table
4501
Event ID Registered ?
4502
NO
YES
End
Obtain Transmission Method and Addressee
4503
Generate Transmission packet
4504
Send Transmission packet
4505
All Records Completed ?
4506
NO
YES
End

FIG. 62

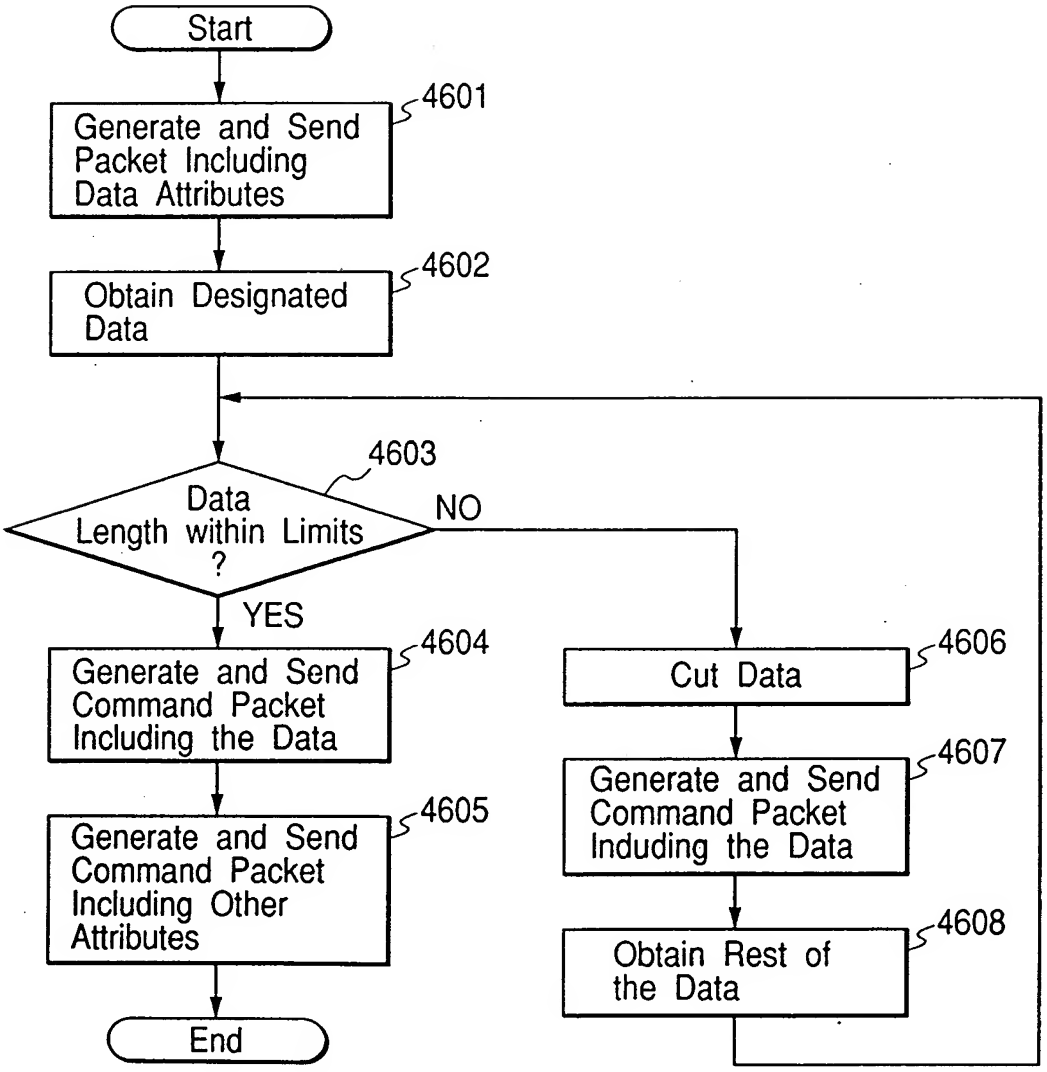

Start
Generate and Send Packet Including Data Attributes
4601
Obtain Designated Data
4602
Data Length within Limits ?
4603
NO
YES
Generate and Send Command Packet Including the Data
4604
Generate and Send Command Packet Including Other Attributes
4605
End
Cut Data
4606
Generate and Send Command Packet Induding the Data
4607
Obtain Rest of the Data
4608

FIG. 63

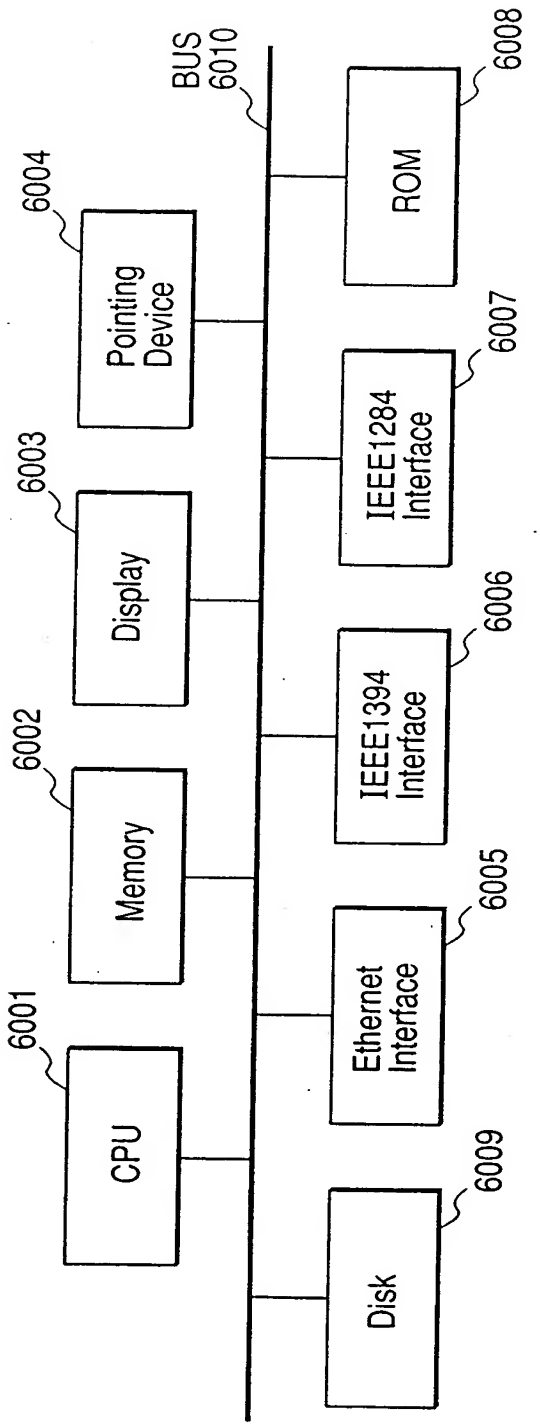

BUS
6010
6001
CPU
6002
Memory
6003
Display
6004
Pointing Device
6005
Ethernet Interface
6006
IEEE1394 Interface
6007
IEEE1284 Interface
6008
ROM
6009
Disk

FIG. 64

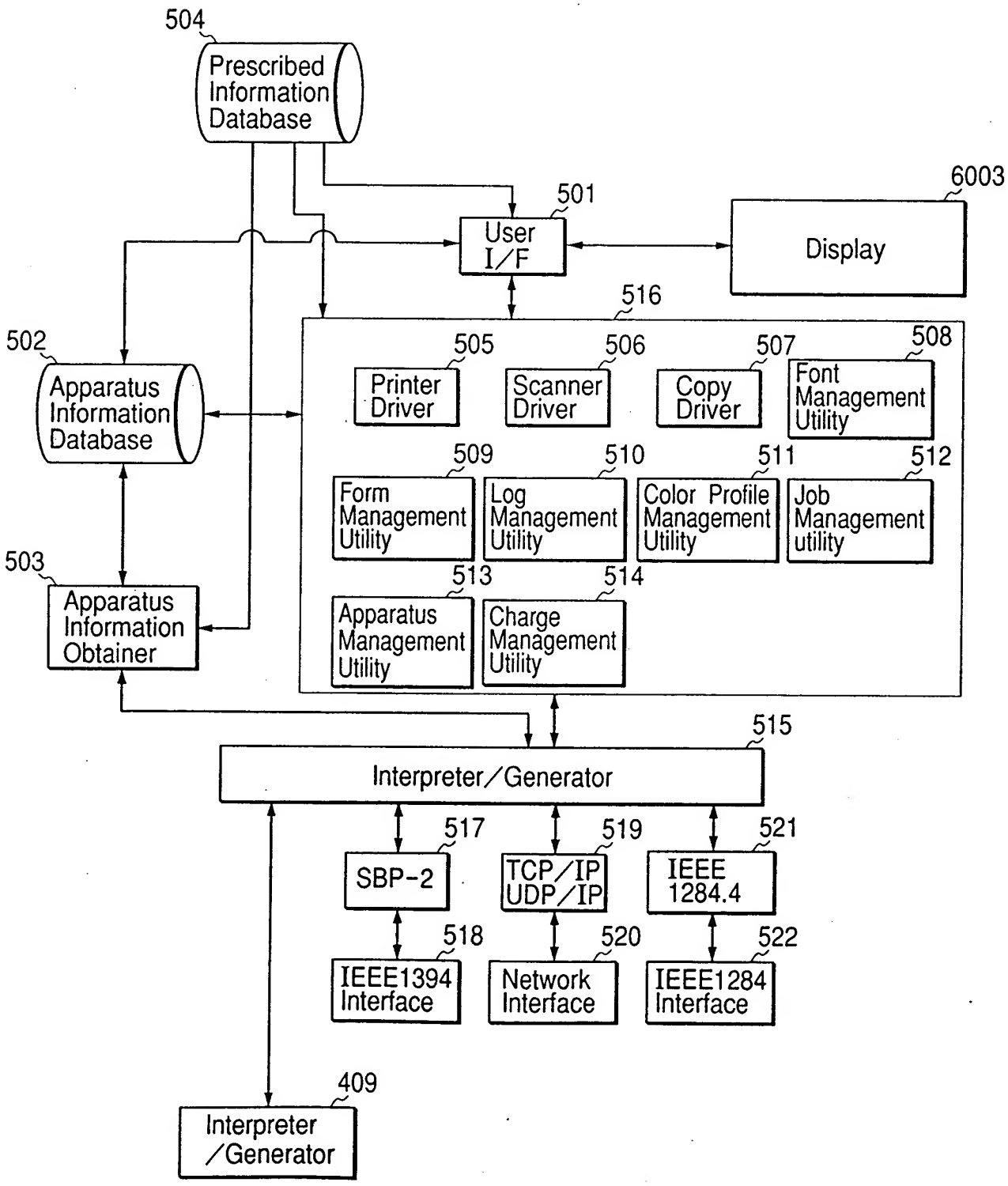

504
Prescribed Information Database
6003
501
User I/F
Display
516
502
Apparatus Information Database
505
Printer Driver
506
Scanner Driver
507
Copy Driver
508
Font Management Utility
509
Form Management Utility
510
Log Management Utility
511
Color Profile Management Utility
512
Job Management utility
503
Apparatus Information Obtainer
513
Apparatus Management Utility
514
Charge Management Utility
515
Interpreter/Generator
517
SBP-2
519
TCP/IP UDP/IP
521
IEEE 1284.4
518
IEEE1394 Interface
520
Network Interface
522
IEEE1284 Interface
409
Interpreter /Generator

FIG. 65

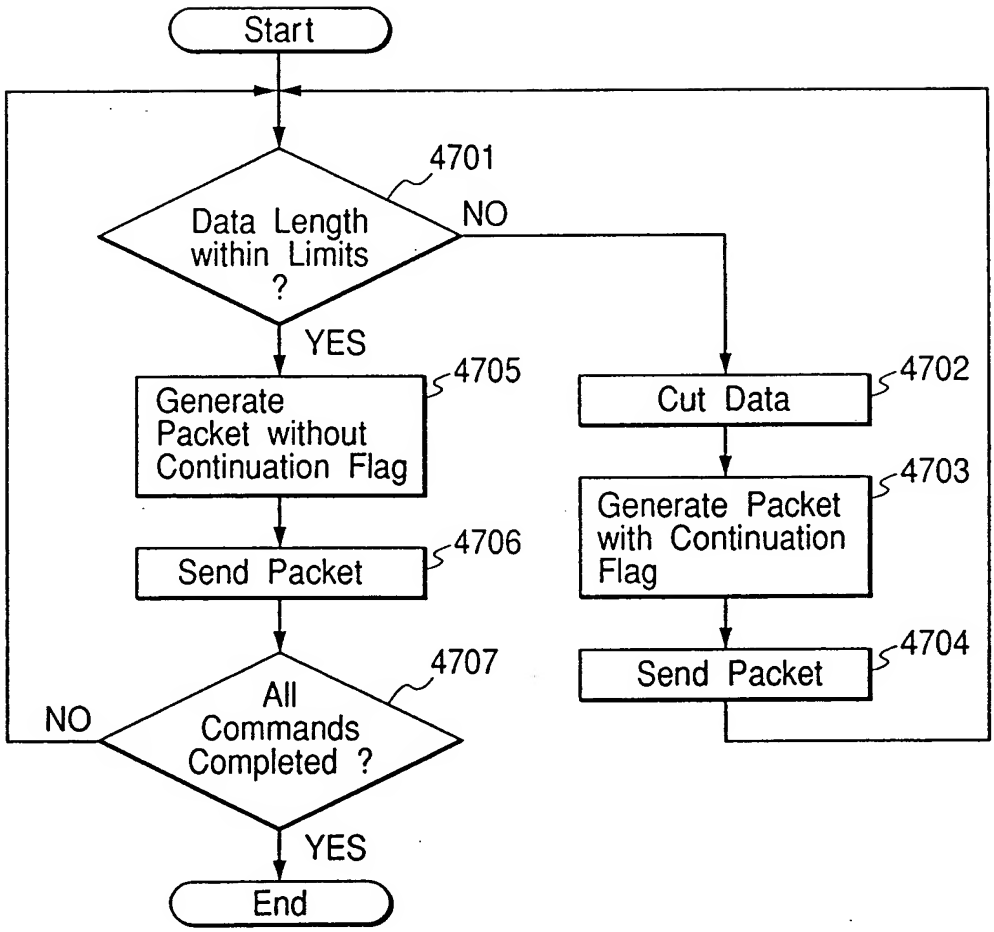

Start
4701
Data Length within Limits ?
NO
YES
4705
Generate Packet without Continuation Flag
4706
Send Packet
4707
All Commands Completed ?
NO
YES
End
4702
Cut Data
4703
Generate Packet with Continuation Flag
4704
Send Packet

FIG. 66

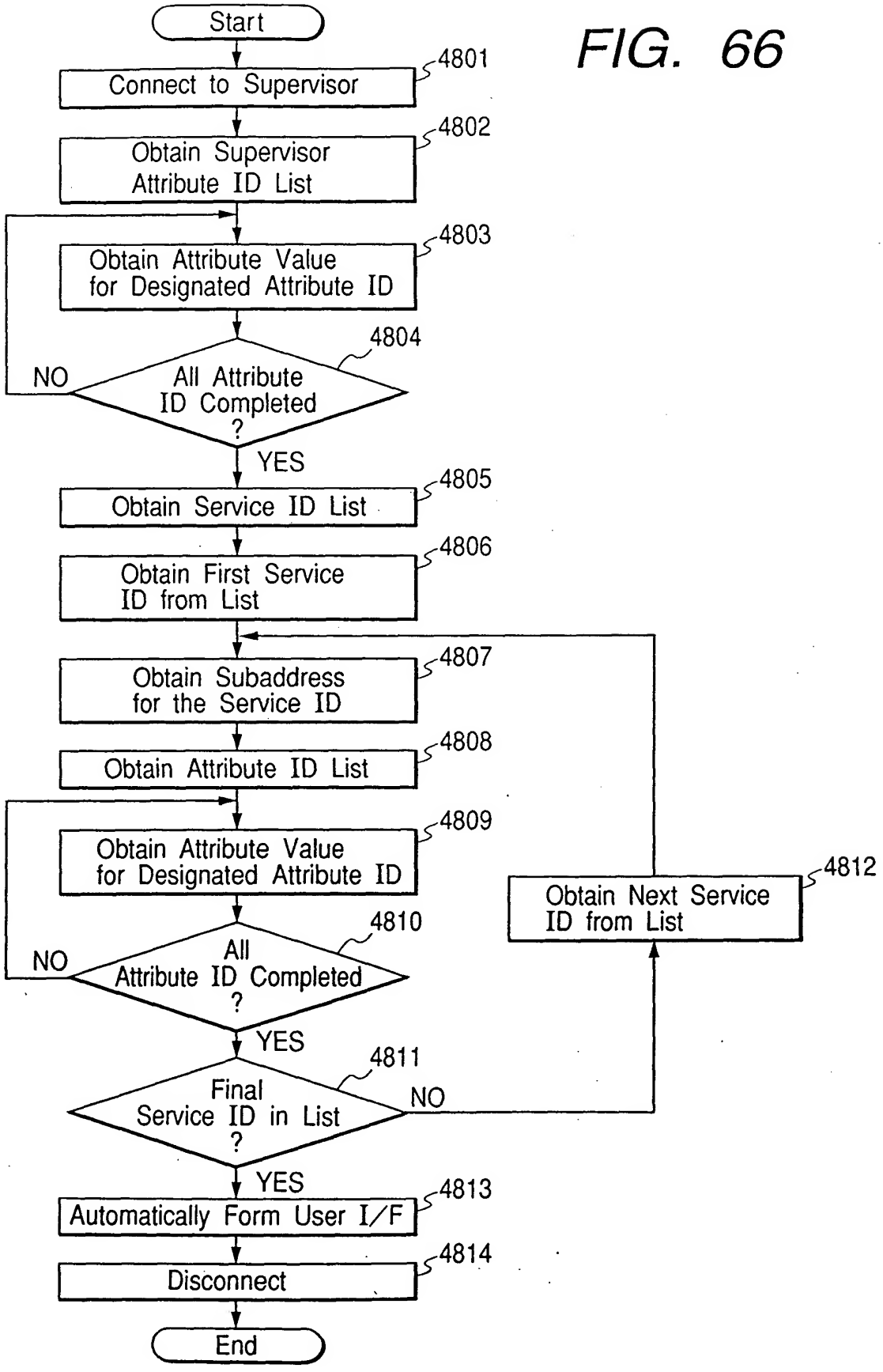

Start
Connect to Supervisor
4801
Obtain Supervisor Attribute ID List
4802
Obtain Attribute Value for Designated Attribute ID
4803
All Attribute ID Completed ?
4804
NO
YES
Obtain Service ID List
4805
Obtain First Service ID from List
4806
Obtain Subaddress for the Service ID
4807
Obtain Attribute ID List
4808
Obtain Attribute Value for Designated Attribute ID
4809
All Attribute ID Completed ?
4810
NO
YES
Final Service ID in List ?
4811
NO
Obtain Next Service ID from List
4812
YES
Automatically Form User I/F
4813
Disconnect
4814
End

FIG. 67

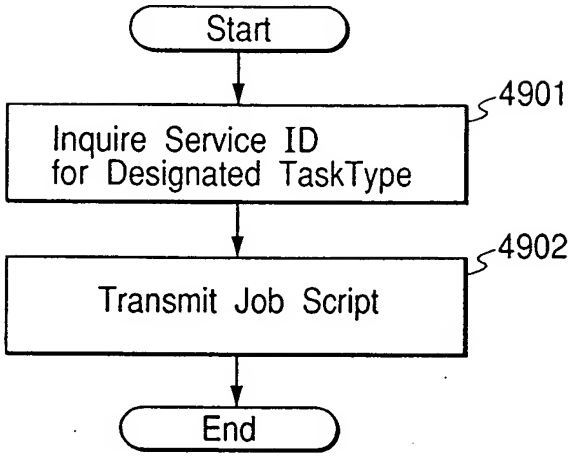

Start
4901
Inquire Service ID
for Designated TaskType
4902
Transmit Job Script
End

FIG. 68

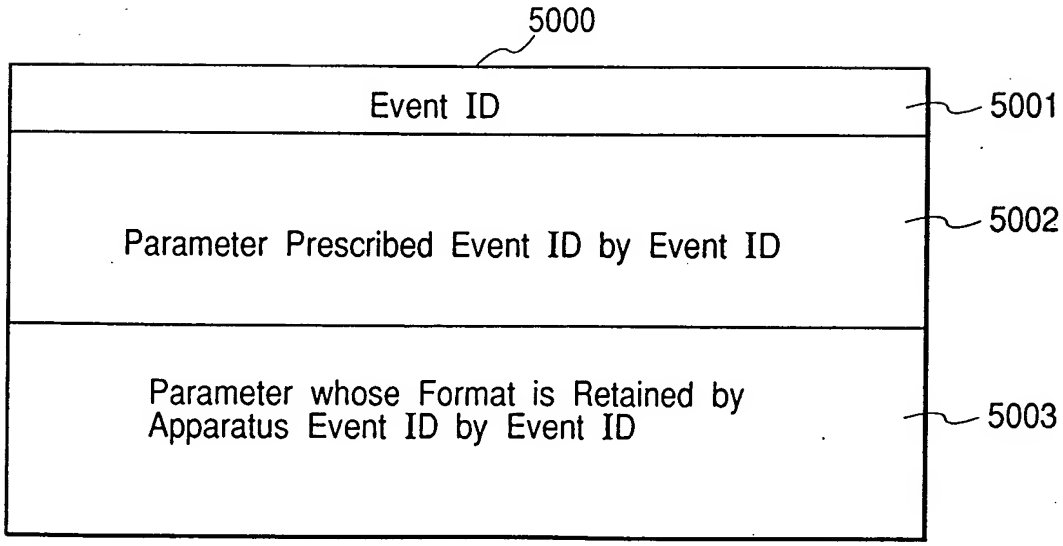

5000
Event ID
5001
Parameter Prescribed Event ID by Event ID
5002
Parameter whose Format is Retained by
Apparatus Event ID by Event ID
5003

FIG. 69

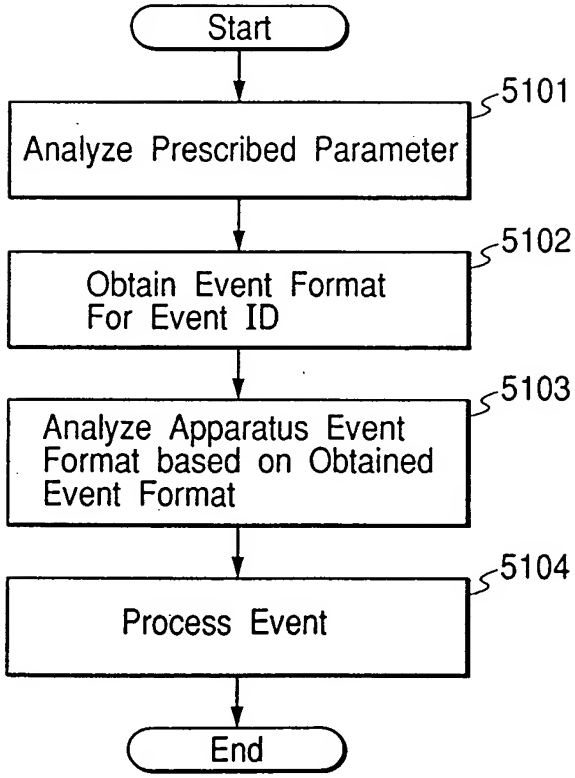

Start
5101
Analyze Prescribed Parameter
5102
Obtain Event Format For Event ID
5103
Analyze Apparatus Event Format based on Obtained Event Format
5104
Process Event
End

FIG. 70

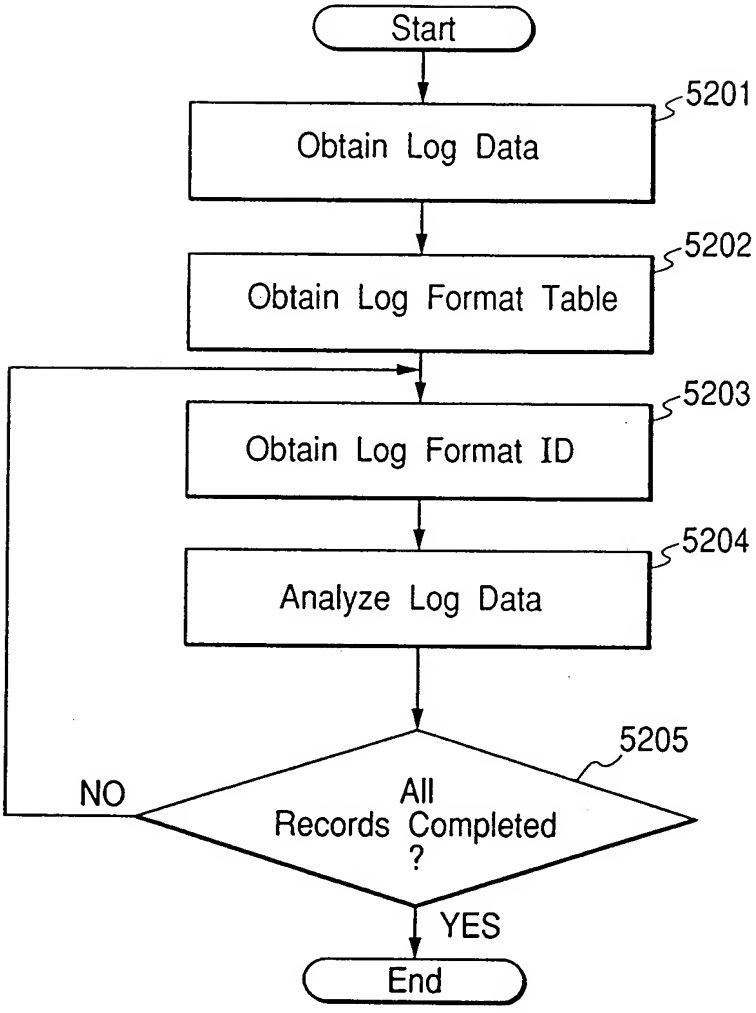

Start
Obtain Log Data
5201
Obtain Log Format Table
5202
Obtain Log Format ID
5203
Analyze Log Data
5204
All Records Completed ?
5205
NO
YES
End

FIG. 71

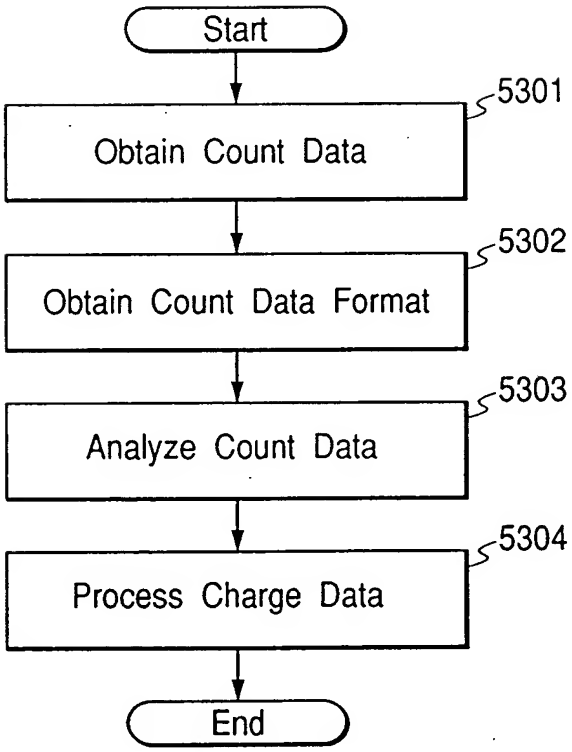

Start
5301
Obtain Count Data
5302
Obtain Count Data Format
5303
Analyze Count Data
5304
Process Charge Data
End

FIG. 72

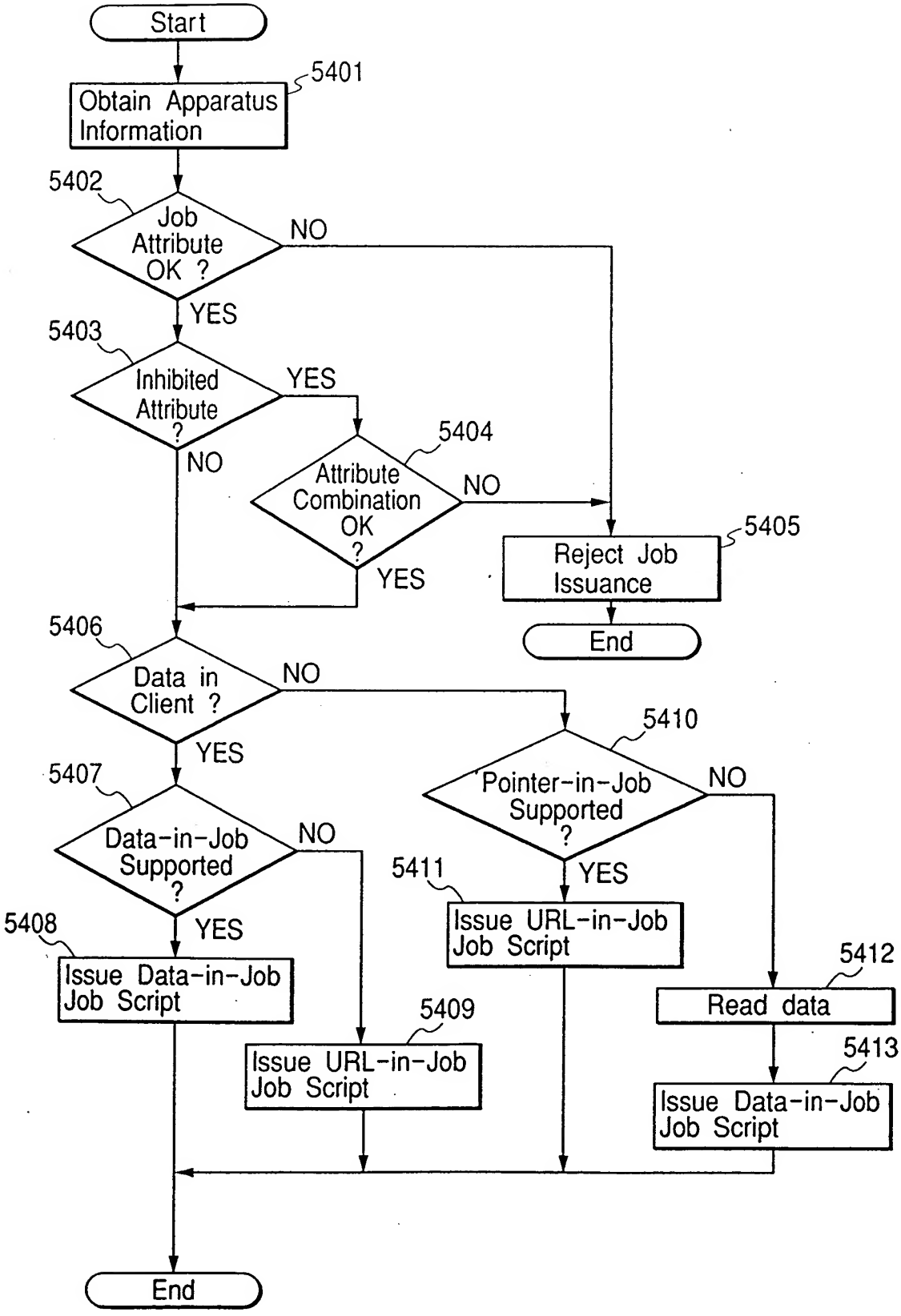

Start
Obtain Apparatus Information
5401
Job Attribute OK ?
5402
NO
YES
Inhibited Attribute ?
5403
YES
NO
Attribute Combination OK ?
5404
NO
YES
Reject Job Issuance
5405
End
Data in Client ?
5406
NO
YES
Data-in-Job Supported ?
5407
NO
YES
Issue Data-in-Job Job Script
5408
Issue URL-in-Job Job Script
5409
Pointer-in-Job Supported ?
5410
NO
YES
Issue URL-in-Job Job Script
5411
Read data
5412
Issue Data-in-Job Job Script
5413
End

FIG. 73

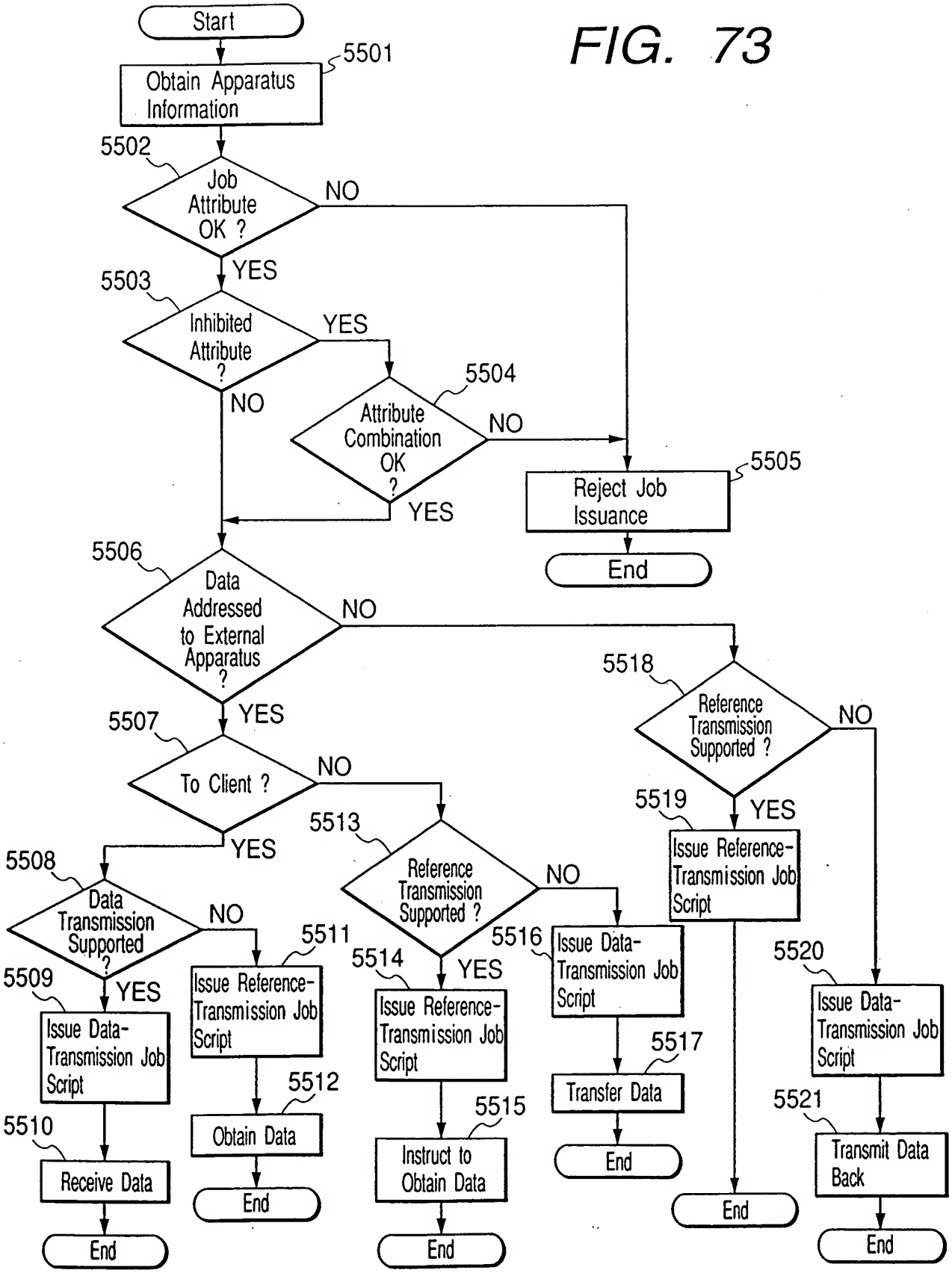

Start
Obtain Apparatus Information
5501
Job Attribute OK ?
5502
NO
YES
Inhibited Attribute ?
5503
YES
NO
Attribute Combination OK ?
5504
NO
YES
Reject Job Issuance
5505
End
Data Addressed to External Apparatus ?
5506
NO
YES
To Client ?
5507
NO
YES
Data Transmission Supported ?
5508
NO
YES
Issue Data-Transmission Job Script
5509
Receive Data
5510
End
Issue Reference-Transmission Job Script
5511
Obtain Data
5512
End
Reference Transmission Supported ?
5513
NO
YES
Issue Reference-Transmission Job Script
5514
Instruct to Obtain Data
5515
End
Reference Transmission Supported ?
5518
NO
YES
Issue Reference-Transmission Job Script
5519
End
Issue Data-Transmission Job Script
5516
Transfer Data
5517
End
Issue Data-Transmission Job Script
5520
Transmit Data Back
5521
End

FIG. 74

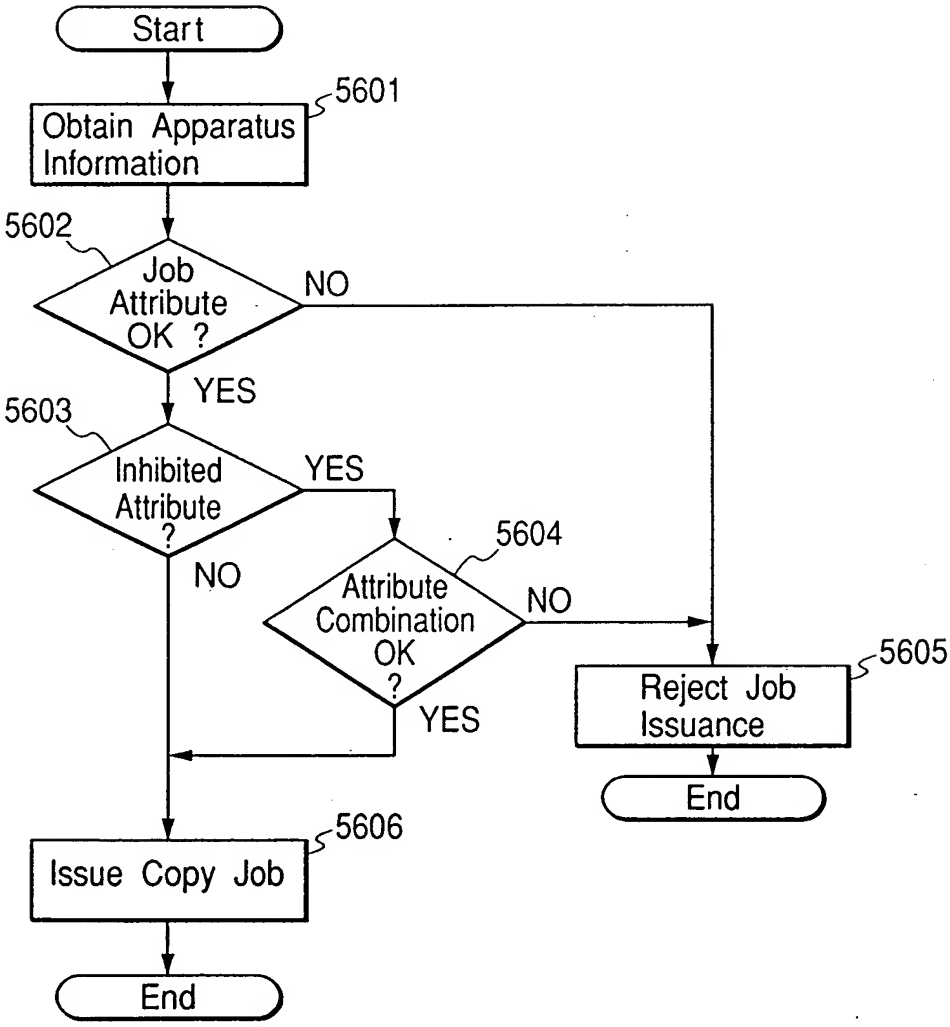
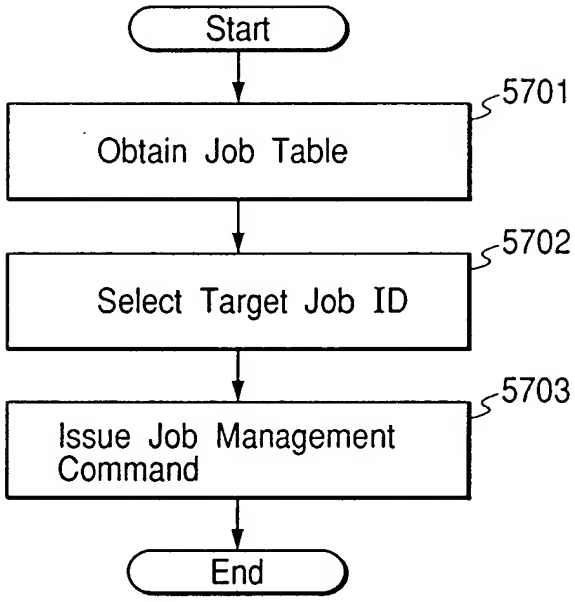

Start
5601
Obtain Apparatus Information
5602
Job Attribute OK ?
NO
YES
5603
Inhibited Attribute ?
YES
NO
5604
Attribute Combination OK ?
NO
YES
5605
Reject Job Issuance
End
5606
Issue Copy Job
End

FIG. 75


Start
5701
Obtain Job Table
5702
Select Target Job ID
5703
Issue Job Management Command
End

# FIG. 76

| DISK315 |
| --- |
| UI Driver401 |
| Network Interface Driver402 |
| IEEE1284 Interface Driver403 |
| IEEE1394 Interface Driver404 |
| User Interface Manager405 |
| TCP/IP,UDP/IP Module406 |
| IEEE1284.4 Module407 |
| SBP-2 Module408 |
| Interpreter/Generator409 |
| Supervisor410 |
| Security Gate411 |
| Dispatcher412 |
| Font Manager413 |
| Form Overlay Manager414 |
| Log Manager415 |
| Color Profile Manager416 |
| PDL (PS) Rasterizer 417 |
| PDL (PCL) Rasterizer 418 |
| Scan Job Manager419 |
| Scan Controller420 |
| Print Job Manager501 |
| Print Job Manager502 |
| Print Job Manager503 |
| Print Job Manager504 |
| Print Job Manager505 |
| Print Job Manager506 |
| Print Job Manager507 |
| Print Job Manager508 |
| Print Job Manager509 |
| LBT Controller510 |
| LBT Controller511 |
| Inkjet Controller512 |
| Copy Job Manager601 |
| Copy Job Manager602 |
| Copy Job Manager603 |
| Copy Job Manager604 |
| Copy Job Manager605 |
| Copy Job Manager606 |
| Copy Job Manager607 |
| Copy Job Manager608 |
| Program Shown in Fig. 47 |
| Program Shown in Fig. 48 |
| Program Shown in Fig. 49 |
| Program Shown in Fig. 50 |
| Program Shown in Fig. 51 |
| Program Shown in Fig. 53 |
| Program Shown in Fig. 54 |
| Program Shown in Fig. 55 |
| Program Shown in Fig. 56 |
| Program Shown in Fig. 57 |
| Program Shown in Fig. 58 |
| Program Shown in Fig. 59 |
| Program Shown in Fig. 60 |
| Program Shown in Fig. 61 |
| Program Shown in Fig. 62 |
| Other Program and Data |

FIG. 77

| DISK6009 |
| --- |
| Database504 |
| Database502 |
| User I/F Program501 |
| Apparatus Information Obtaining Program503 |
| Printer Driver505 |
| Scanner Driver506 |
| Copy Driver507 |
| Font Management Utility508 |
| Form Management Utility509 |
| Log Management Utility 510 |
| Color Profile Management Utility511 |
| Job Management Utility512 |
| Apparatus Management Utility513 |
| Charge Management Utility514 |
| Interpreter/Generator515 |
| SBB-2 Module517 |
| IEEE1394 Interface Driver518 |
| TCP/IP,UDP/IP Module519 |
| Network Interface Driver520 |
| IEEE1284.4 Module521 |
| IEEE1284.4Interface Driver522 |
| Program Shown in Fig. 65 |
| Program Shown in Fig. 66 |
| Program Shown in Fig. 67 |
| Program Shown in Fig. 69 |
| Program Shown in Fig. 70 |
| Program Shown in Fig. 71 |
| Program Shown in Fig. 72 |
| Program Shown in Fig. 73 |
| Program Shown in Fig. 74 |
| Program Shown in Fig. 75 |
| Operation System |
| Document Editing Program |
| Other Program and Data |

FIG. 78

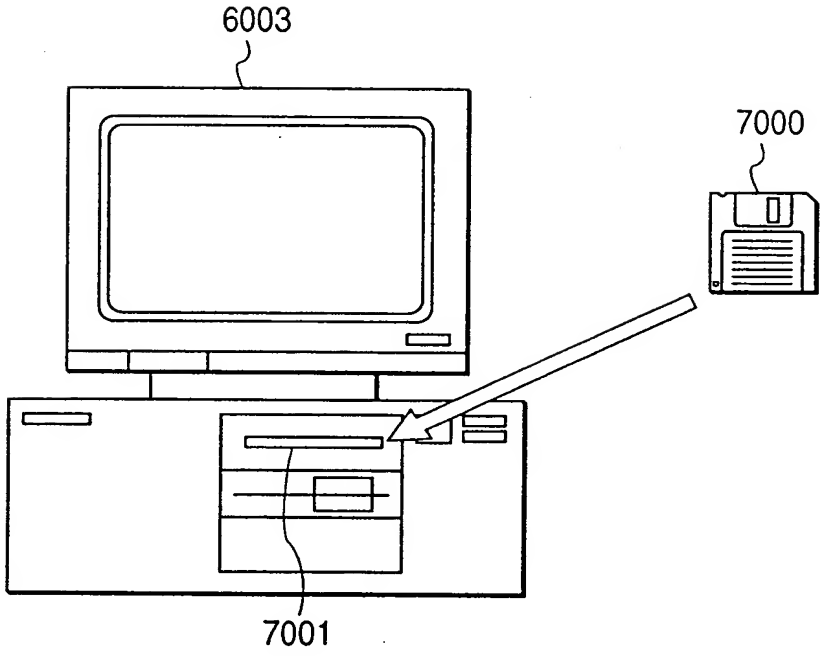


FIG. 79

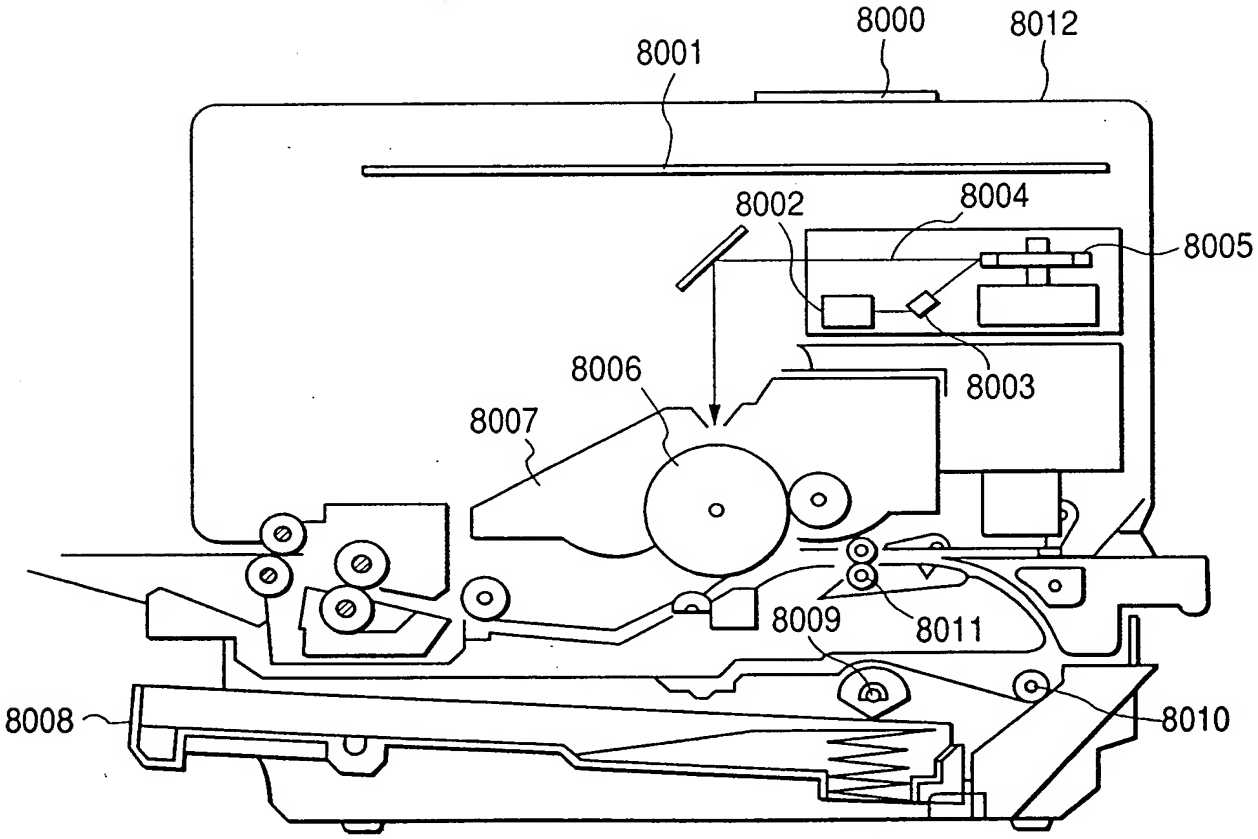

8000
8012
8001
8002
8004
8005
8003
8006
8007
8009
8011
8008
8010

FIG. 80

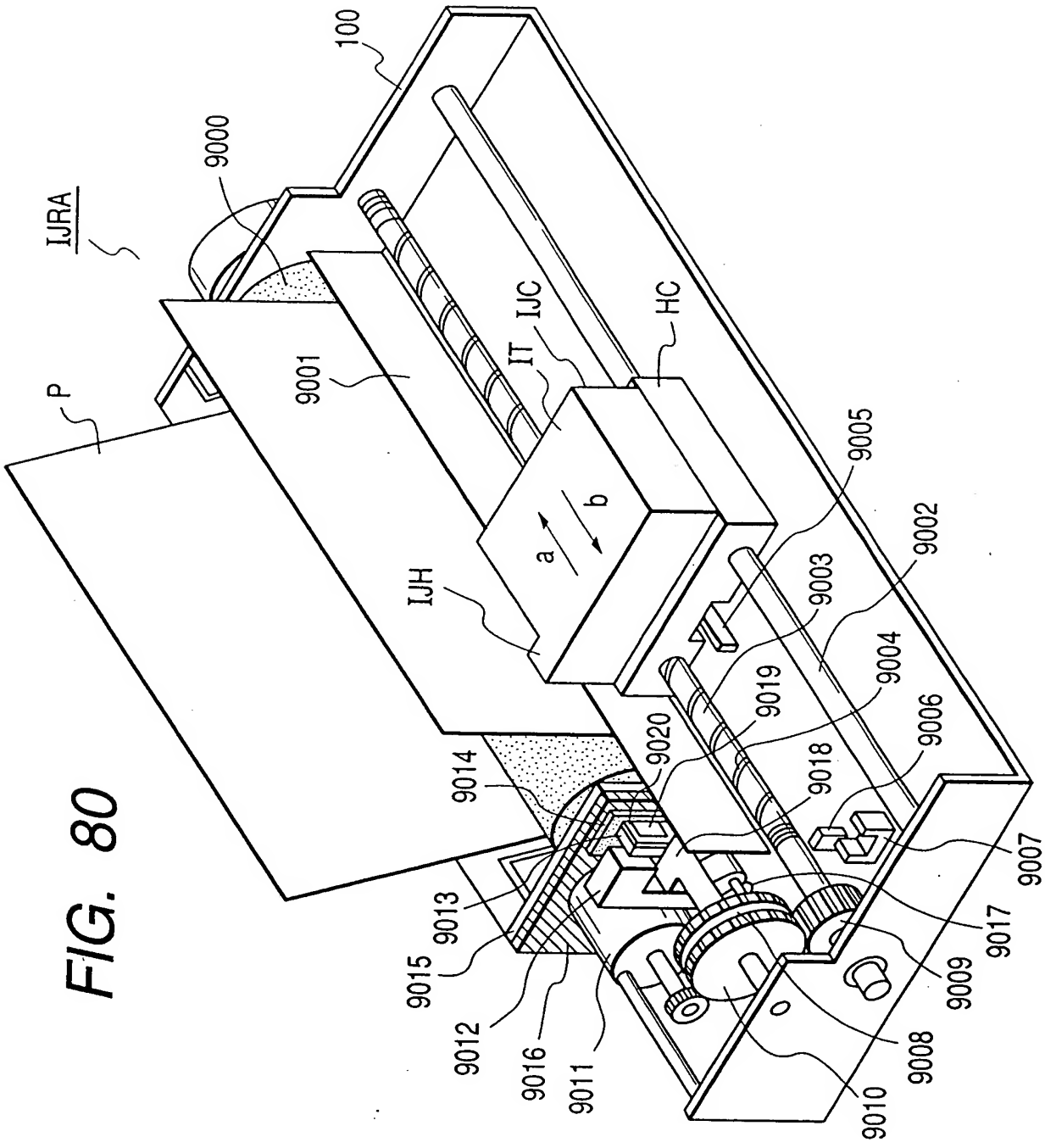

IJRA
100
9000
P
9001
IT
IJC
HC
9005
9002
9003
IJH
a
b
9004
9019
9020
9006
9018
9014
9007
9013
9017
9015
9009
9012
9016
9008
9011
9010

FIG. 81

| Printer Driver A | |
|---|---|
| Supported PDL | : PDL1, PDL2 |
| Color | : Not Available |
| Highest Resolution | : 1200 dpi |
| Lowest Resolution | : 600 dpi |

FIG. 82

| Printer Driver B | |
|---|---|
| Supported PDL | : PDL3 |
| Color | : Available |
| Highest Resolution | : 600 dpi |
| Lowest Resolution | : 300 dpi |

FIG. 83

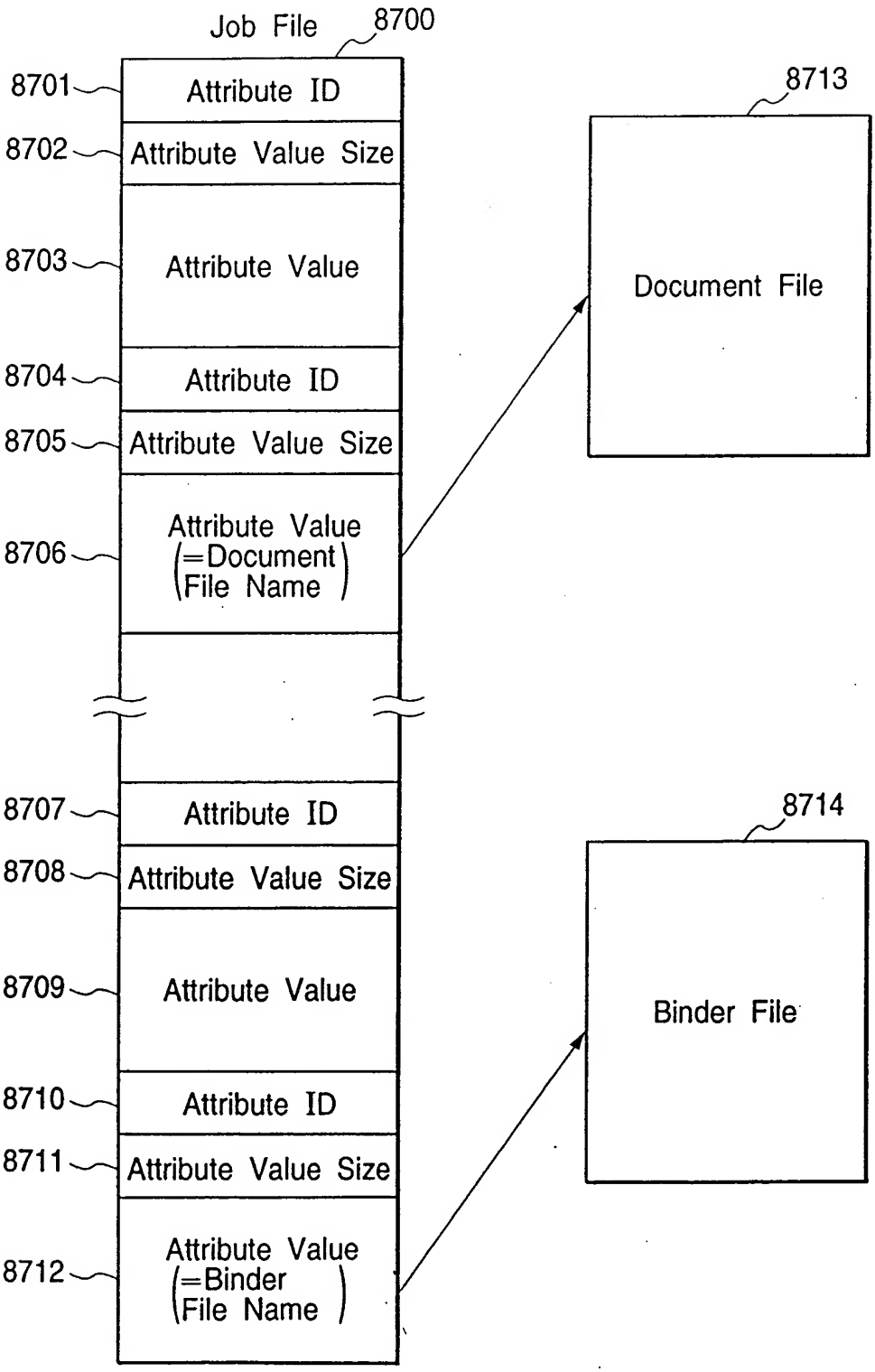

Job File
8700
8701
Attribute ID
8702
Attribute Value Size
8703
Attribute Value
8704
Attribute ID
8705
Attribute Value Size
8706
Attribute Value (=Document File Name)
8707
Attribute ID
8708
Attribute Value Size
8709
Attribute Value
8710
Attribute ID
8711
Attribute Value Size
8712
Attribute Value (=Binder File Name)
8713
Document File
8714
Binder File

FIG. 84

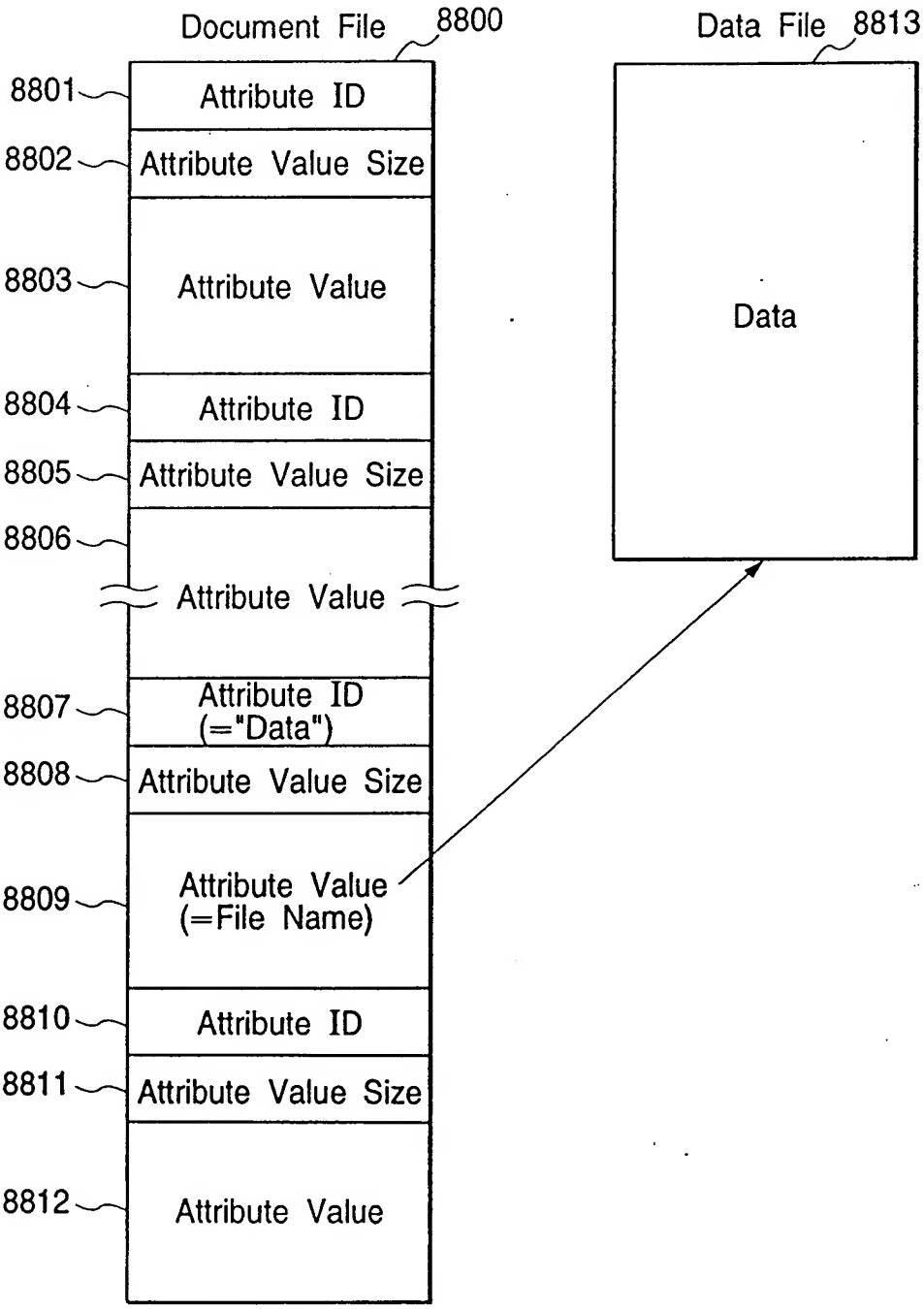

Document File
8800
Data File
8813
8801
Attribute ID
8802
Attribute Value Size
8803
Attribute Value
Data
8804
Attribute ID
8805
Attribute Value Size
8806
Attribute Value
8807
Attribute ID
(="Data")
8808
Attribute Value Size
8809
Attribute Value
(=File Name)
8810
Attribute ID
8811
Attribute Value Size
8812
Attribute Value

FIG. 85

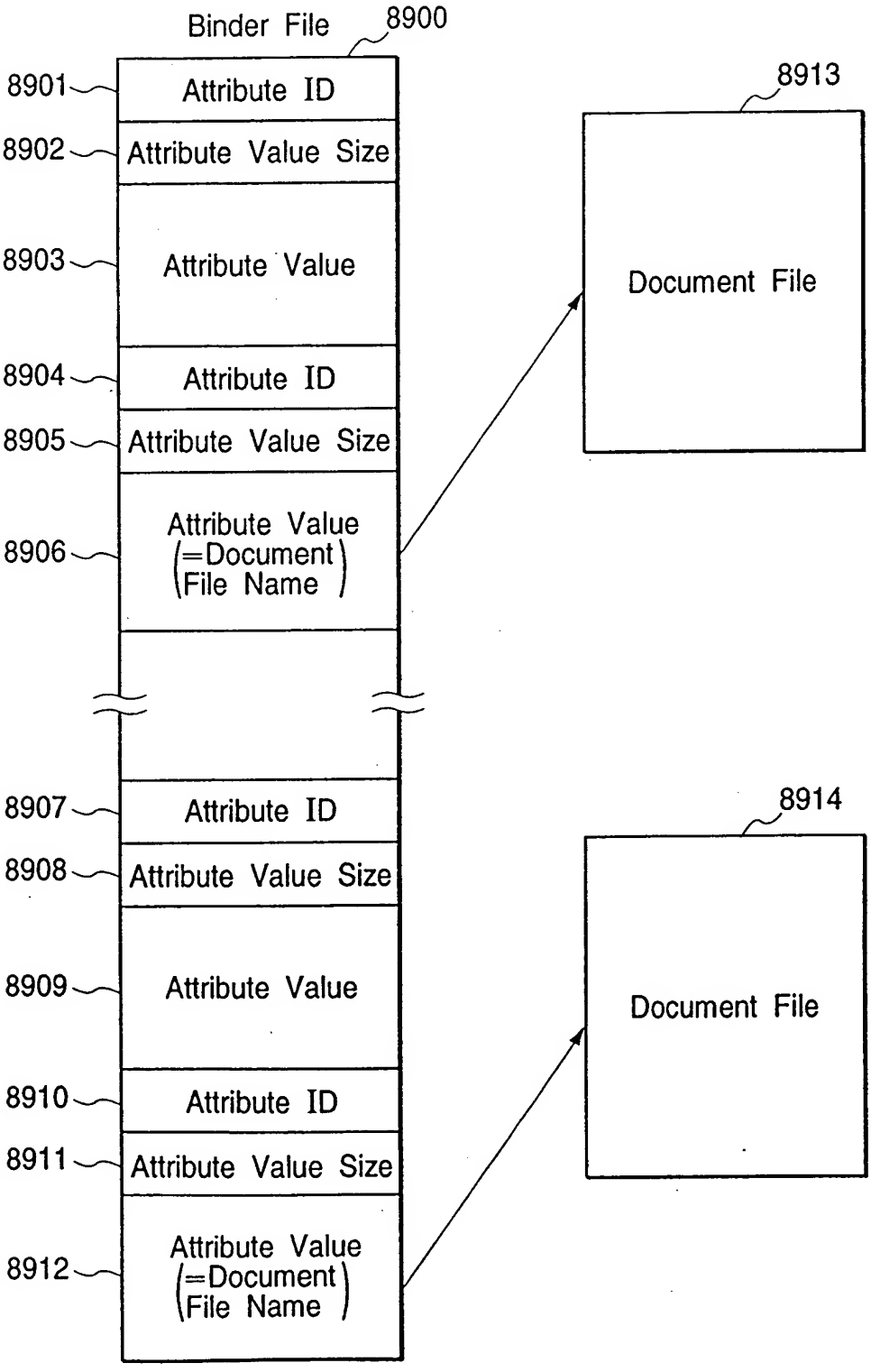

Binder File
8900
8901
Attribute ID
8902
Attribute Value Size
8903
Attribute Value
8904
Attribute ID
8905
Attribute Value Size
8906
Attribute Value (=Document File Name)
8907
Attribute ID
8908
Attribute Value Size
8909
Attribute Value
8910
Attribute ID
8911
Attribute Value Size
8912
Attribute Value (=Document File Name)
8913
Document File
8914
Document File

FIG. 86

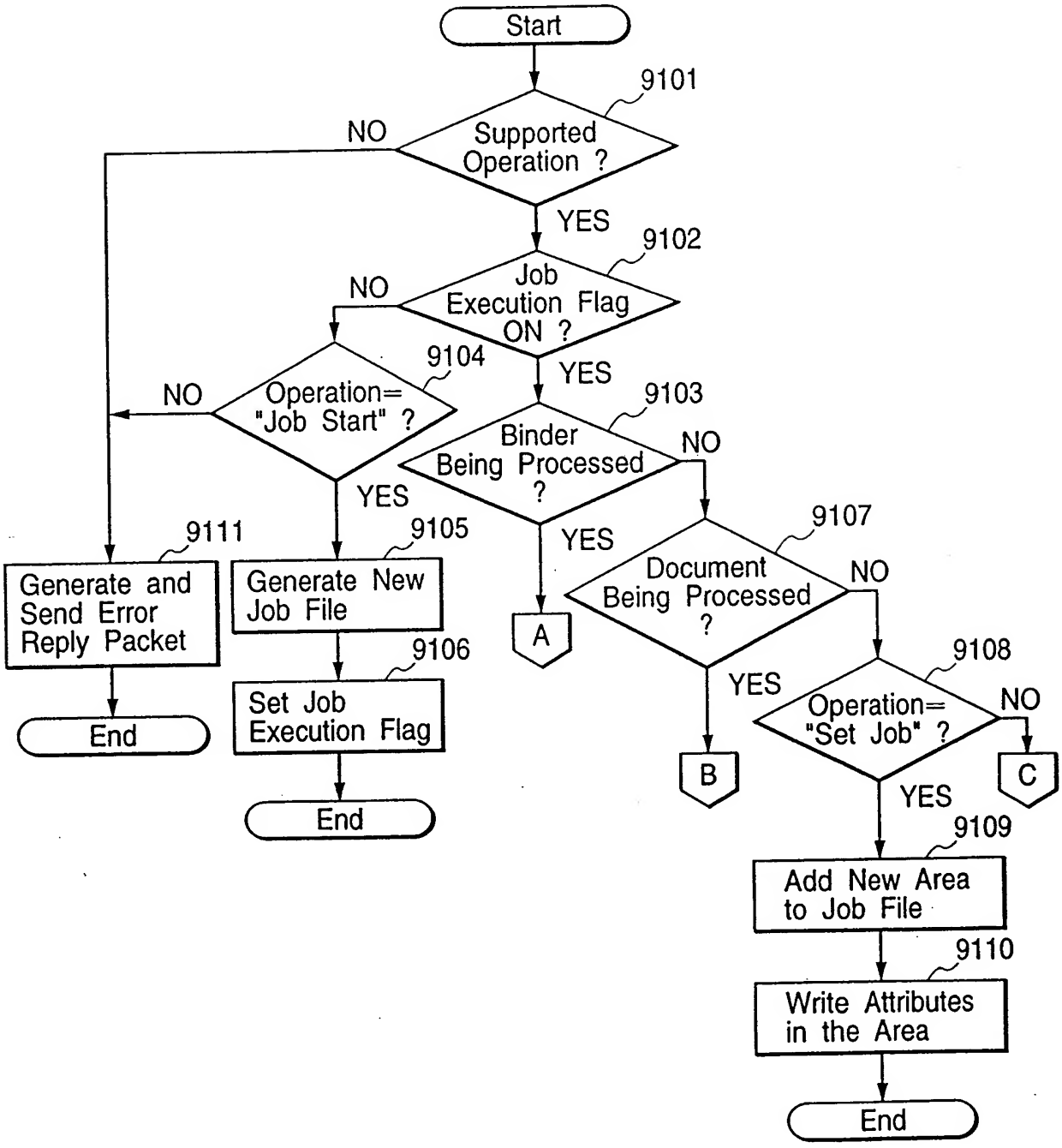

Start
9101
Supported Operation ?
NO
YES
9102
Job Execution Flag ON ?
NO
YES
9104
Operation= "Job Start" ?
NO
YES
9103
Binder Being Processed ?
NO
YES
9107
Document Being Processed ?
NO
YES
9108
Operation= "Set Job" ?
NO
YES
9111
Generate and Send Error Reply Packet
End
9105
Generate New Job File
9106
Set Job Execution Flag
End
A
B
C
9109
Add New Area to Job File
9110
Write Attributes in the Area
End

FIG. 87

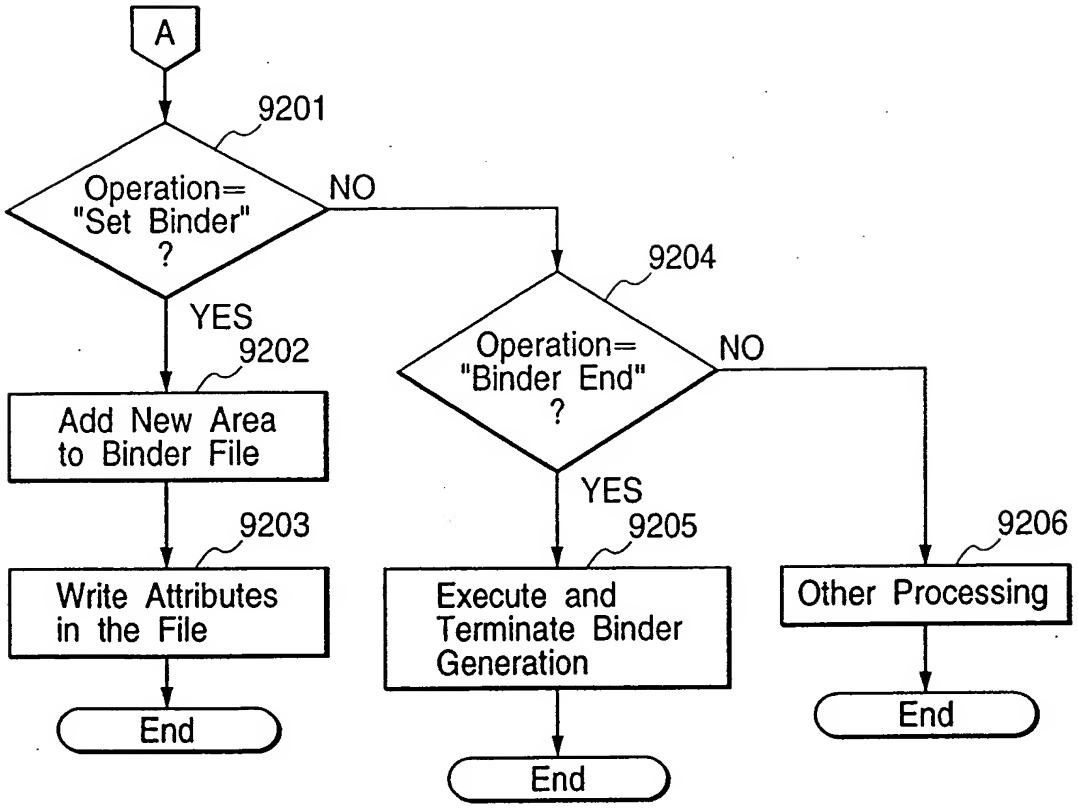

A
9201
Operation= "Set Binder" ?
NO
YES
9202
Add New Area to Binder File
9203
Write Attributes in the File
End
9204
Operation= "Binder End" ?
NO
YES
9205
Execute and Terminate Binder Generation
End
9206
Other Processing
End

FIG. 88

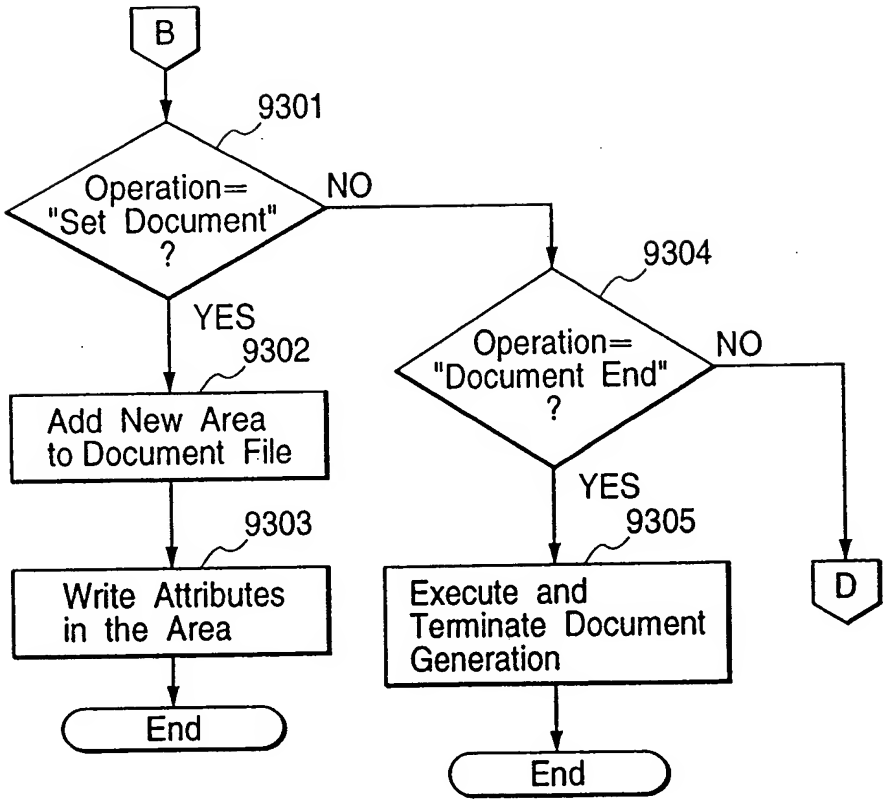

B
9301
Operation= "Set Document" ?
NO
YES
9302
Add New Area to Document File
9303
Write Attributes in the Area
End
9304
Operation= "Document End" ?
NO
YES
9305
Execute and Terminate Document Generation
End
D

FIG. 89

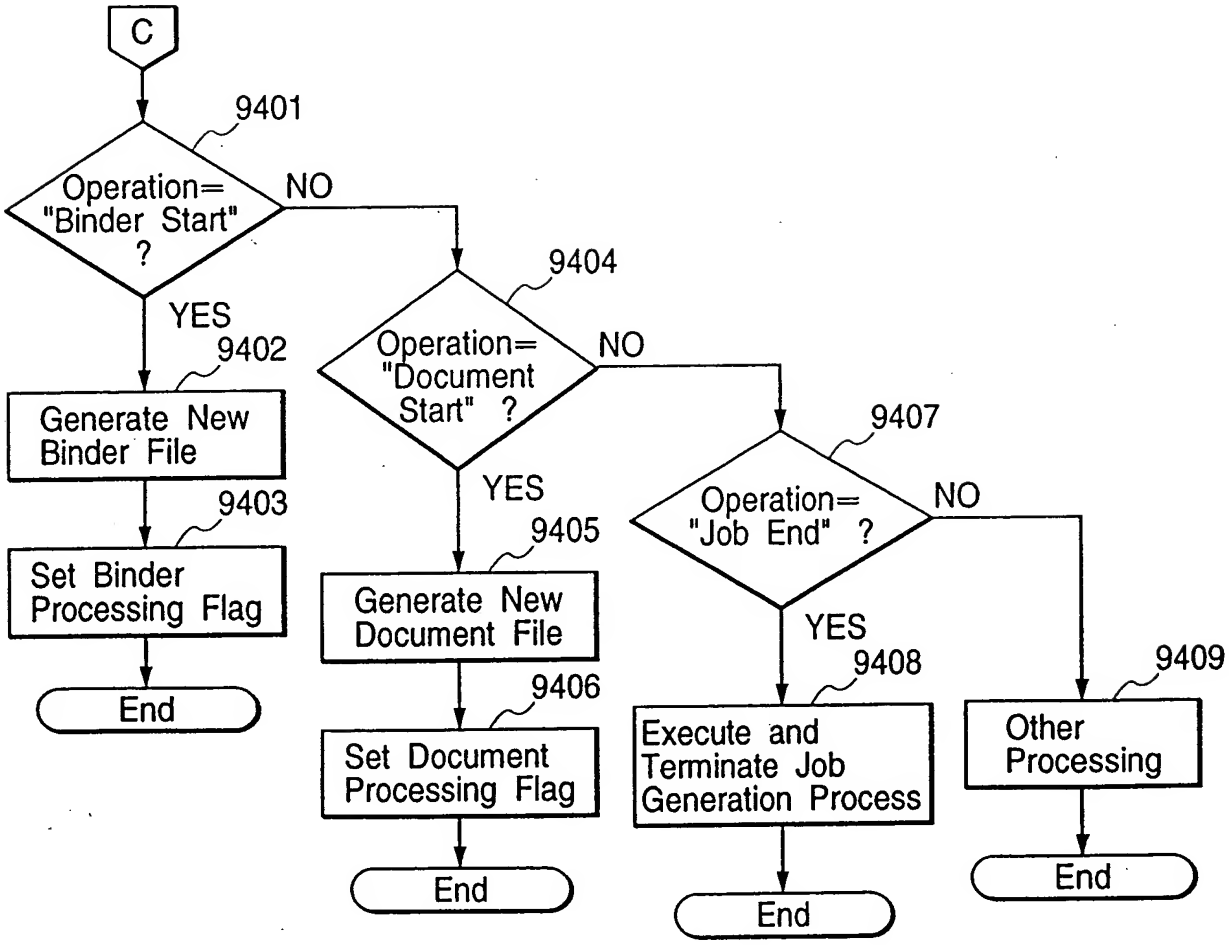

C
9401
Operation= "Binder Start" ?
NO
YES
9402
Generate New Binder File
9403
Set Binder Processing Flag
End
9404
Operation= "Document Start" ?
NO
YES
9405
Generate New Document File
9406
Set Document Processing Flag
End
9407
Operation= "Job End" ?
NO
YES
9408
Execute and Terminate Job Generation Process
End
9409
Other Processing
End

FIG. 90

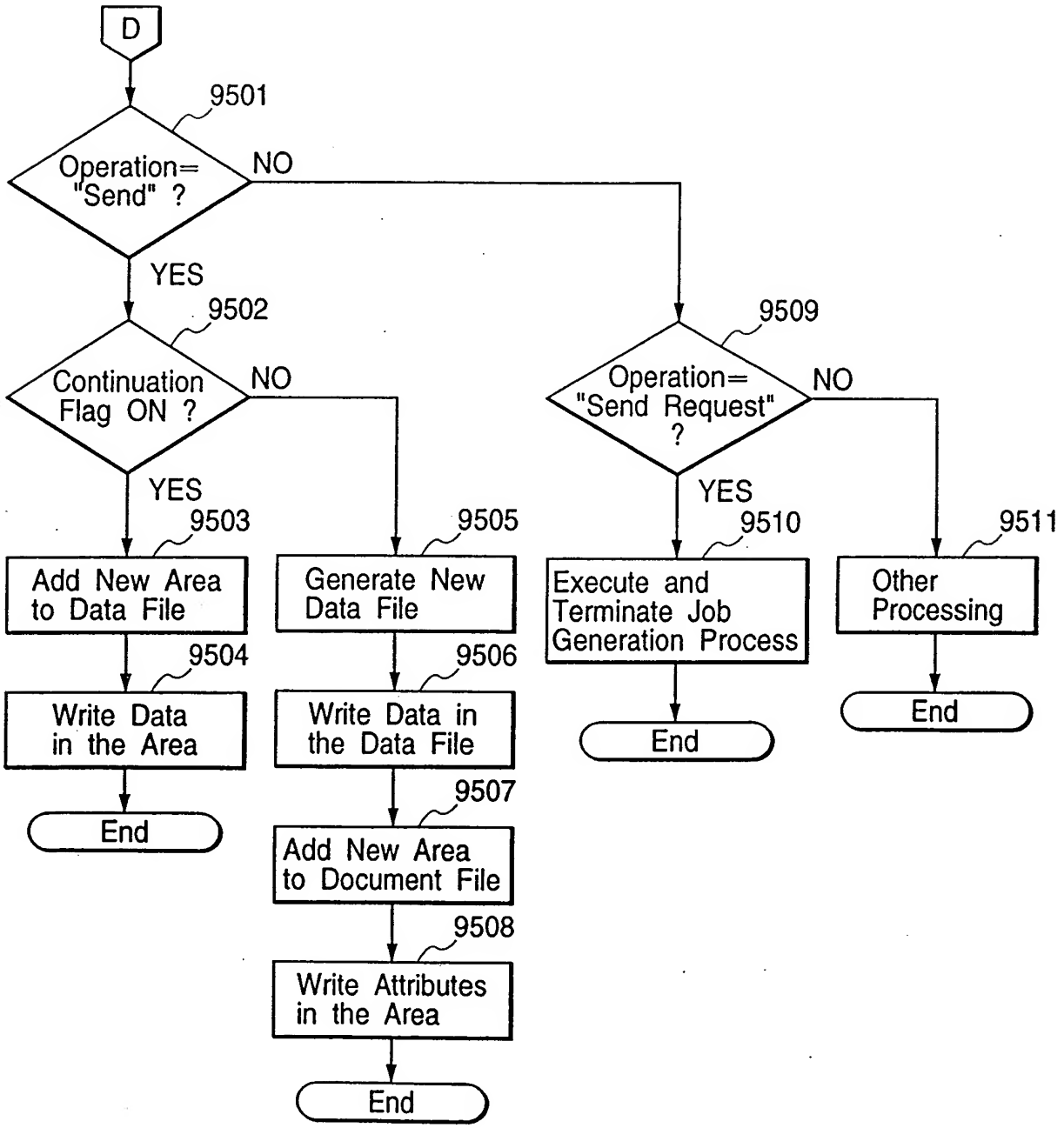

D
9501
Operation= "Send" ?
NO
YES
9502
Continuation Flag ON ?
NO
YES
9503
Add New Area to Data File
9504
Write Data in the Area
End
9505
Generate New Data File
9506
Write Data in the Data File
9507
Add New Area to Document File
9508
Write Attributes in the Area
End
9509
Operation= "Send Request" ?
NO
YES
9510
Execute and Terminate Job Generation Process
End
9511
Other Processing
End

FIG. 91

Document Table

| 4001 Document ID | 4002 Document File Name |
|---|---|
| 1 | P0002 |
| 2 | P1002 |
| 3 | P2002 |

FIG. 92

Binder Table

| 4003 Binder ID | 4004 Binder File Name |
|---|---|
| 1 | P0003 |
| 2 | P1003 |
| 3 | P2003 |

FIG. 93

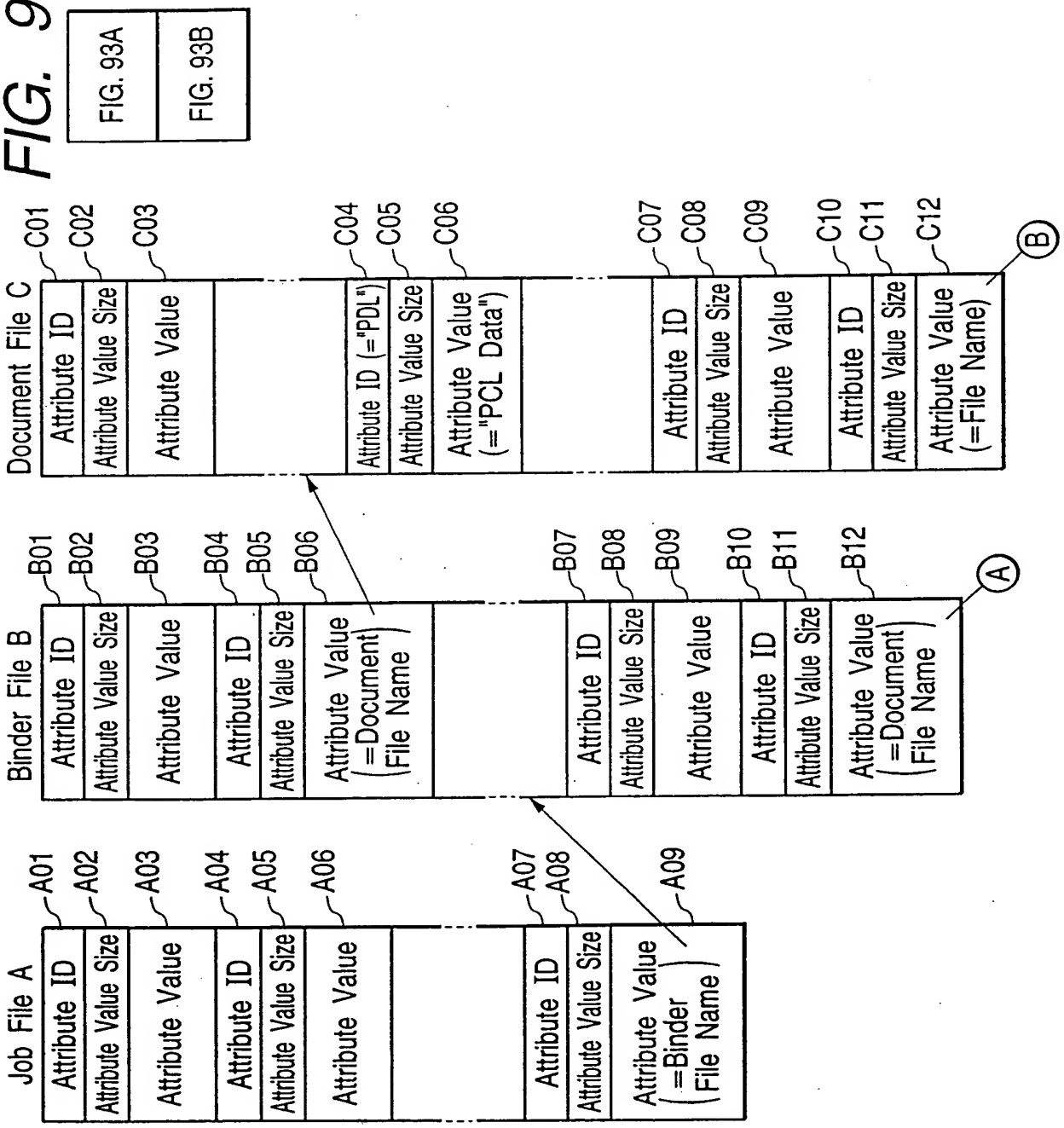
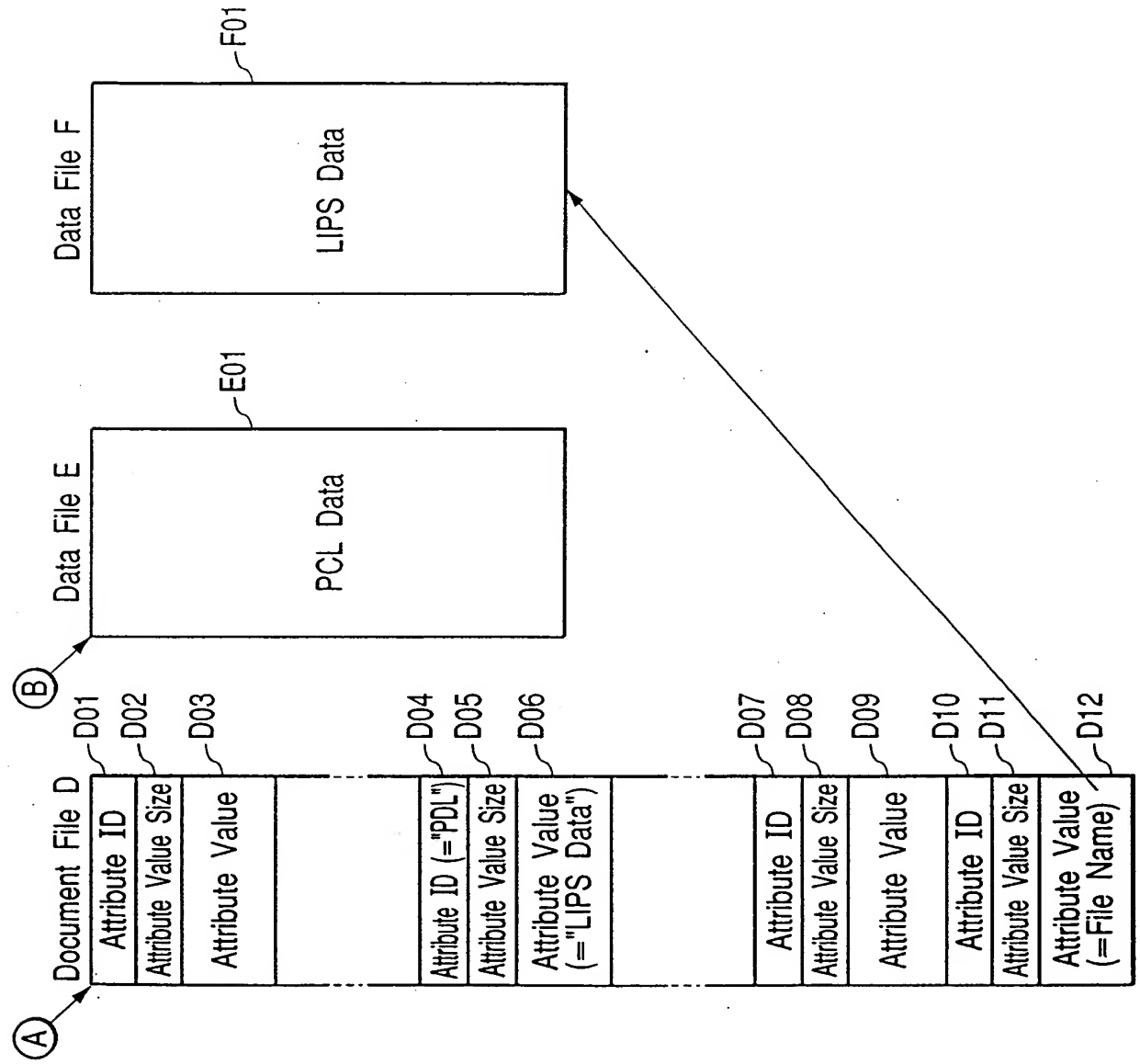



FIG. 93A

FIG. 93B


Document File D
Attribute ID
Attribute Value Size
Attribute Value
Attribute ID (="PDL")
Attribute Value Size
Attribute Value (="LIPS Data")
Attribute ID
Attribute Value Size
Attribute Value
Attribute ID
Attribute Value Size
Attribute Value (=File Name)
D01
D02
D03
D04
D05
D06
D07
D08
D09
D10
D11
D12
A
B
Data File E
PCL Data
E01
Data File F
LIPS Data
F01